APPENDIX C
BIOLOGICAL RESOURCE ANALYSES

APPENDIX C-1
BIOLOGICAL RESOURCES REPORT

H. T. HARVEY & ASSOCIATES

Ecological Consultants

Tasman East Focus Area Plan
Biological Resources Report

Project #3953-01

Prepared for:

Tali Ashurov
David J. Powers & Associates, Inc.
1111 Broadway, Suite 1510
Oakland , CA 94607

Prepared by:

H. T. Harvey & Associates

July 26, 2018

983 University Avenue, Building D • Los Gatos, CA 95032 • Ph: 408.458.3200 • F: 408.458.3210

List of Abbreviated Terms

ac	acre(s)
BMPs	best management practices
Cal-IPC	California Invasive Plant Council
CCC	Central California Coast
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	Code of Federal Regulations
City	City of Santa Clara
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
FESA	Federal Endangered Species Act
FMP	Fisheries Management Plan
ft	foot/feet
ft^2	square feet
General Plan	City of Santa Clara's 2010–2035 General Plan
GIS	Geographic Information Systems
GPS	Global Positioning System
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
mi	mile(s)
MRP	Municipal Regional Stormwater NPDES Permit
NETR	Nationwide Environmental Title Research
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
Plan	Tasman East Focus Area Plan
Plan area	Tasman East Focus Area
Porter-Cologne	Porter-Cologne Water Quality Control Act
RWQCB	Regional Water Quality Control Board
SCVWD	Santa Clara Valley Water District
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VHP	Santa Clara Valley Habitat Plan

Table of Contents

Figures

Tables

Appendices

List of Preparers

Steve Rottenborn, Ph.D., Principal/Senior Wildlife Ecologist
Kelly Hardwicke, Ph.D., Associate Plant/Wetland Ecologist
Robin Carle, M.S., Project Manager/Senior Wildlife Ecologist
Maya Goklany, M.S., Plant Ecologist

Section 1. Introduction

This report describes the biological resources present in the area of the proposed Tasman East Focus Area Plan (Plan), as well as the potential biological impacts of the proposed Plan and measures necessary to reduce these impacts to less-than-significant levels under the California Environmental Quality Act (CEQA). This assessment is based on the Plan description and *Draft Tasman East Focus Area Plan* (City of Santa Clara 2016), provided to H. T. Harvey & Associated by David J. Powers & Associates in December 2016.

1.1 Plan Area Location

The 46.16-acre (ac) Tasman East Focus Area (Plan area) is located in Santa Clara, California and is bounded by Tasman Drive to the south, the Guadalupe River to the east, the Santa Clara Golf & Tennis Club to the north, and Lafayette Street to the west (Figure 1). The Eastside Drainage Swale, or Tasman Channel, which is owned and maintained by the City of Santa Clara, is located at the toe of the Guadalupe River levee and flows south to north along the eastern edge of the Plan area (Figure 2). The Plan area includes approximately 36 parcels that are developed with light industrial and commercial uses, and the current buildings on the site are generally warehouses with associated parking and rear-yard storage areas. There is also a data center at the southwest corner of the site, and a cluster of office buildings at the southeast corner of the site. The Plan area is located on the *Milpitas*, *California* 7.5-minute United States Geological Survey (USGS) quadrangle.

1.2 Plan Description

The City of Santa Clara's 2010–2035 General Plan (General Plan), adopted in 2010, identifies the Plan area as an area with the potential to contribute to the City's Regional Housing Needs Allocation goals and enhance quality of life in the city (City of Santa Clara 2010). The General Plan identifies goals and policies for the Plan area related to land use, mobility, the public realm, urban form, and sustainability. The purpose of the Plan is to build on City-specified goals and policies to provide a clear framework for project implementation within the Plan area, thereby creating a tool for the City to regulate individual development proposals (City of Santa Clara 2016).

The Plan area is currently zoned for light industrial land use, which allows for uses such as manufacturing, processing, repairing, and storing products. Through the implementation of the Plan, the zoning of the Plan area will be updated to high-density residential land use, which will allow for a high-density residential neighborhood with a mix of uses at the ground floor.

The proposed Plan creates a programmatic framework for the development of a high-density, transit-oriented neighborhood with supportive retail services. The Plan would allow development of up to 4,500 dwelling units and up to 106,000 square feet (ft^2) of retail space including a 25,000 ft^2 grocery store. Residential densities in the Plan area would range from a minimum of 60 dwelling units per acre on sites less than 2 ac in size to a

minimum of 100 dwelling units per acre on sites larger than 2 ac. Buildings in the Plan area would be, at maximum, 220 feet (ft) in height.

The Plan would maintain the existing roadway network and vehicular connections to Tasman Drive and Lafayette Street. Lick Mill Boulevard would be extended through the Plan area to connect with the existing roadway network and future City Place (currently the Santa Clara Golf & Tennis Club) to the north. The right-of-way on Calle de Luna would be widened to accommodate sidewalks. An extension of Calle del Sol within the Plan area, from Calle de Luna to Calle del Mundo, would provide an additional north/south connection. Public open space within the Plan area is planned for a minimum of 4 ac. Connections from planned open space areas and pathways to the adjacent City Place development and levee along the Guadalupe River are proposed.

The Eastside Drainage Swale in the Plan area carries flows to the Eastside Retention Basin approximately 0.5 mile (mi) northwest of the Plan area, where the water is pumped into the Guadalupe River. The Tasman East Focus Area Plan includes the possible culverting of the Eastside Drainage Swale within the Plan area.

N:\Projects3900\3953-01\report\Focus Area Plan\Fig 1 Vicinity Map.mxd mchilds

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 1. Vicinity Map
Biological Resources Report
Tasman East Focus Area Plan (3953-01)
December 2016

N:\Projects3900\3953-01\report\Focus Area Plan\Fig 2 Plan Area.mxd mchilds

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 2. Plan Area
Biological Resources Report
Tasman East Focus Area Plan (3953-01)
December 2016

Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed the *Draft Tasman East Focus Area Plan* (City of Santa Clara 2016) and Plan description provided by David J. Powers & Associates in November and December 2016; aerial images (Google Inc. 2016); a USGS topographic map; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (2016); the City of Santa Clara's 2010–2035 General Plan (City of Santa Clara 2010); and other relevant reports, scientific literature, and technical databases. Previous reports prepared for the Plan area and vicinity were also reviewed, including the *City of Santa Clara Eastside Retention Basin Drainage Swale Vegetation Mowing Project Biological Resources Report* (H. T. Harvey & Associates 2010a). For the purposes of this report, the "Plan vicinity" encompasses a 5-mi radius surrounding the Plan area. In addition, for plants, we reviewed all species on current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists occurring in the Plan area region, which is defined as the *Milpitas, California* USGS 7.5-minute quadrangle and surrounding eight quadrangles (*Calaveras Reservoir*, *Cupertino*, *La Costa Valley*, *Mountain View*, *Newark*, *Niles*, *San José East*, and *San José West*). Quadrangle-level results are not maintained for CRPR 3 and 4 species, so we also conducted a search of the CNPS Inventory records for these species occurring in Santa Clara County (CNPS 2016). In addition, we queried the CNDDB (2016) for natural communities of special concern that occur within the Plan area region, and we perused records of birds reported in nearby areas, such as along the Guadalupe River and at the Ulistac Natural Area, on eBird (Cornell Lab of Ornithology 2016) and on the South-Bay-Birds List Serve (2016).

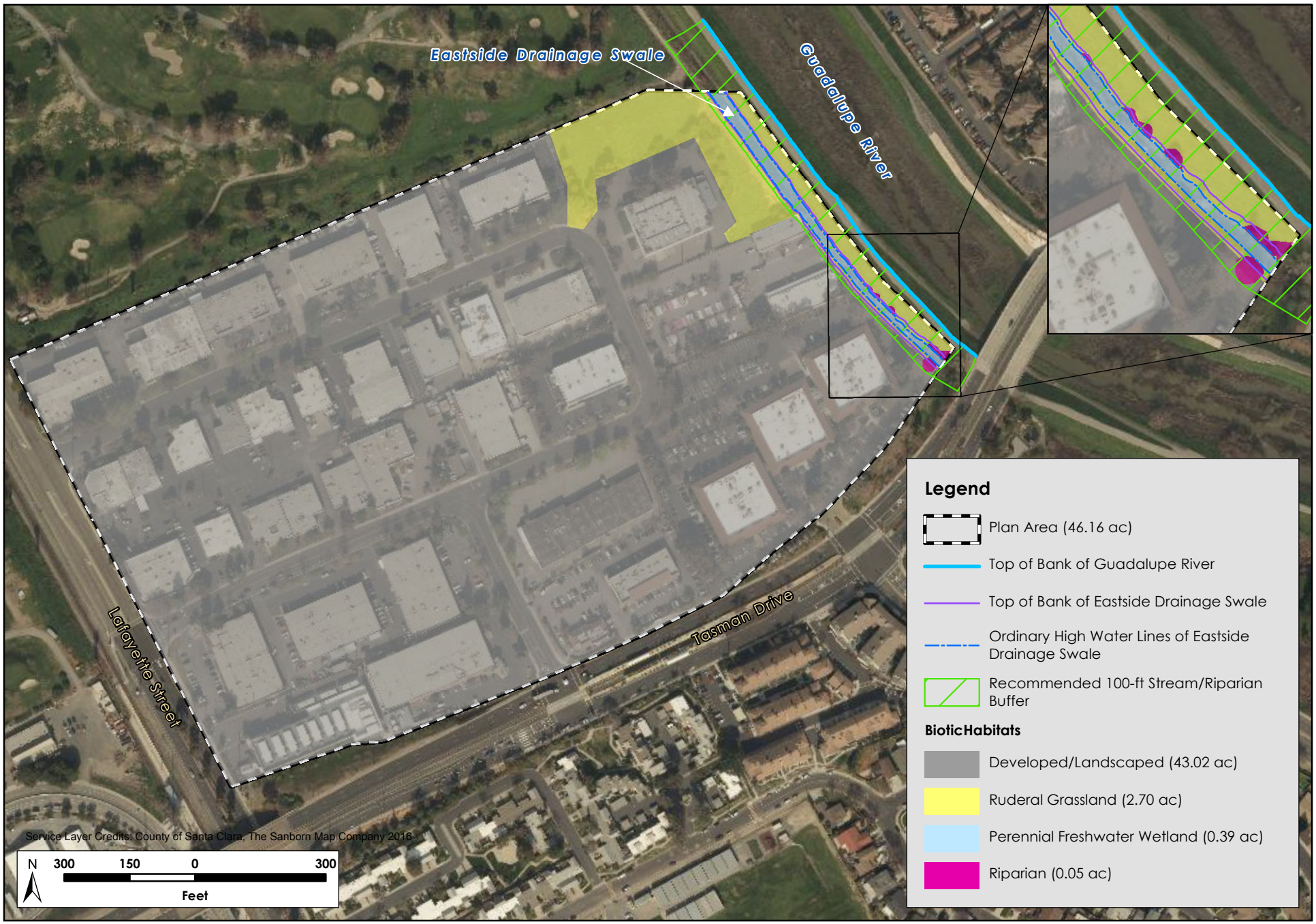
2.2 Site Visits

A reconnaissance-level field survey of the Plan area was conducted by H. T. Harvey & Associates wildlife ecologist, Robin Carle, M.S., and plant ecologist Maya Goklany, M.S., on December 13, 2016. The purpose of this survey was to provide an impact assessment specific to the proposed rezoning and development as described in the Plan. Specifically, surveys were conducted to (1) assess existing biotic habitats and general wildlife communities in the Plan area and in adjacent areas, (2) assess the potential for implementation of the Plan to impact special-status species and/or their habitats, and (3) identify potential jurisdictional habitats, such as waters of the U.S./state and riparian habitat.

Biotic habitats were mapped using a sub-meter Global Positioning System (GPS) (Trimble GeoXH® 3000 GPS unit) and an iPad 3 with Geographic Information Systems (GIS) Pro and GIS Kit software (Garafa, LLC 2015). Before site surveys were conducted, maps and images of the Plan area were obtained from several sources and reviewed. These sources included the USGS, National Wetlands Inventory (2016), Nationwide Environmental Title Research (NETR) (2016), and aerial images available on Google Earth Pro software (Google Inc. 2016).

The ordinary high water lines and top of bank elevation, or bank-full capacity, of the Eastside Drainage Swale were mapped in the field using a Trimble GeoXH® 3000 GPS unit. The ordinary high water line as defined in Title 33, Code of Federal Regulations (CFR), Part 328.3 is "the line on the shore established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris." Due to the close proximity of the Guadalupe River to the eastern edge of the Plan area, the top of bank elevation of this watercourse was also mapped in the field. Biotic habitats, ordinary high water lines, and the tops of banks are shown on Figure 3.

Focused surveys for Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*, CRPR 1B.1), suitable burrowing owl (*Athene cunicularia*) roosting and nesting habitat (i.e., burrows of California ground squirrels [*Spermophilus beecheyi*] on and within 250 ft of the site), and evidence of previous raptor nesting activity (i.e., large stick nests) were conducted within the Plan area on December 13, 2016. H. T. Harvey & Associates plant ecologist M. Goklany conducted a focused survey for Congdon's tarplant within portions of the Plan area that support suitable habitat (i.e. areas of ruderal grassland shown on Figure 3) on December 13, 2016. M. Goklany visited a known reference population of Congdon's tarplant on December 14, 2016. At that time, the Congdon's tarplant reference population had senesced, and although dead plant stalks and flower heads were still present and intact (indicating a tarplant was present) the plants could not be positively identified to subspecies (Photo 1, Appendix A). Nevertheless, individual tarplants (*Cetromadia parryi* ssp.) would have been detectable during the focused survey of the Plan area, if present. To ensure coverage of the entire ruderal grassland habitat within the Plan area during the Congdon's tarplant survey, the ruderal grassland was divided into transects spaced at 20-foot intervals, and the surveyor walked along each pre-set transect, searching for the target plant species on either side. Neither potential individuals of Congdon's tarplant nor the common pappose tarplant (*Centromadia parryi* ssp. *parryi*) were detected on the Plan area. Thus, tarplants, including the Congdon's tarplant, were determined to be absent from the Plan area.



N:\Projects3900\3953-01\report\Focus Area Plan\Fig 3 Biotic Habitats Map.mxd mchilds

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 3. Biotic Habitats Map
Biological Resources Report
Tasman East Focus Area Plan (3953-01)
December 2016

Section 3. Regulatory Setting

Biological resources in the Plan area are regulated by a number of federal, state, and local laws and ordinances, as described below.

3.1 Federal Regulations

3.1.1 Clean Water Act

Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the 1972 Clean Water Act (CWA). Waters of the U.S. include other waters, such as intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, territorial seas, and wetlands (33 CFR, Part 328). Wetlands are generally identified using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) using an approach that relies on identification of three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology indicators.

Wetlands established solely due to the presence of irrigation water, irrigated fields, or irrigation ditches do not qualify as Section 404 wetlands; however, the USACE has issued specific guidance stating that "where sufficient information is not available to determine the hydrological contribution of irrigation waters to a particular wetlands (i.e., whether the wetland existed at the location prior to the presence of irrigation activities), such wetlands are not removed from consideration as wetlands or waters of the U.S." (USACE 2007).

Drainage ditches may also be considered waters of the U.S. if they meet the definition of a tributary having a bed and banks and ordinary high water mark, and contributing flow directly or indirectly through a traditional navigable water. These include "ditches with perennial flow"; "ditches with intermittent flow that are a relocated tributary, or are excavated in a tributary, or drain wetlands"; and "ditches, regardless of flow, that are excavated in or relocate a tributary" (U.S. Army Corps of Engineers and U.S. Environmental Protection Agency 2015). A *tributary* is defined under Section 404 as "natural, undisturbed waters and those that have been man-altered or constructed, but which science shows function as a tributary."

Construction activities in regulated ditches and jurisdictional wetlands require a Section 404 permit from the USACE. *Construction* as defined under Section 404 includes work that results in an extension or expansion of an existing structure and includes, but is not limited to, activities such as ditch relocation, conversion of a ditch into a pipe, lining ditches with placing impervious materials (e.g., concrete), and the placement of new control structures (USACE 2007).

Project Applicability: The Eastside Drainage Swale within the Plan area does not exhibit a hydrological connection to the Guadalupe River or any other tributary, and based on historical aerial photographs from 1948 to the present day, the swale/drainage ditch appears to have been excavated in uplands and does not

relocate a naturally occurring tributary (NETR 2016). Although these criteria may exclude some features from being classified as waters of the U.S., the USACE may still take jurisdiction over the Eastside Drainage Swale based on the duration of flow, clear presence of ordinary high water indicators, and/or dense growth of hydrophytic vegetation in the bed of the swale, among other factors. During the December 2016 survey, several inches of water were present in the swale. Dense populations of California bulrush (*Schoenoplectus californicus*) and cattail (*Typha* sp.) were present in the swale at that time, and areas where these populations occurred were classified as perennial freshwater wetland habitat (Figure 3). Due to the presence of these strongly hydrophytic, perennial plant species, it is likely that the swale holds water to the point of producing anaerobic soil conditions that form the definition of hydric soils. The ordinary high water line is considered a physical characteristic of linear, flowing channels, and such a line was identified along the swale during the December 2016 survey by changes in plant community, matted and/or absent vegetation, and wracking, which indicates the occurrence of regular flows within the feature (Figure 3). Therefore, the wetlands within the feature would meet three parameter for wetlands, including a hydrophytic vegetation community, hydric soils, and wetland hydrology, and given the close adjacency to the Guadalupe River, may be considered waters of the U.S. even without a direct, unaltered hydrologic connection.

A portion of the Eastside Drainage Swale may be placed within a culvert under the Plan, resulting in the loss of the perennial freshwater wetlands that are currently present in the Eastside Drainage Swale. The permanent loss of waters of the U.S. (e.g., the placement of fill), if the USACE were to consider the swale jurisdictional would require compliance with a Section 404 permit issued by the USACE. Such a permit would not be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs] charged with implementing water quality certification in California.

3.1.2 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 prohibits the creation of any obstruction to the navigable capacity of waters of the U.S., including discharge of fill and the building of any wharfs, piers, jetties, and other structures without Congressional approval or authorization by the Chief of Engineers and Secretary of the Army (33 U.S.C. 403). The shoreward jurisdictional limit of tidal waters is further defined in 33 CFR, Part 329.12 as "the line on the shore reached by the plane of the mean (average) high water." It is important to understand that the USACE does not regulate wetlands under Section 10, only the aquatic or open waters component of bay habitat, and that there is overlap between Section 10 jurisdiction and Section 404 jurisdiction. According to 33 CFR, Part 329.9, a waterbody that was once navigable in its natural or improved state retains its character as "navigable in law" even though it is not presently used for commerce as a result of changed conditions and/or the presence of obstructions. Historical Section 10 waters may occur behind levees in areas that are not currently exposed to tidal or muted-tidal influence, and meet the following criteria: (1) the area is presently at or below the mean high water line; (2) the area was historically at or below mean high water in its "unobstructed, natural state"; and (3) there is no evidence that the area was ever above mean high water.

As mentioned above, Section 404 of the CWA authorizes the USACE to issue permits to regulate the discharge of dredged or fill material into waters of the U.S. If a project also proposes to discharge dredged or fill material and/or introduce other potential obstructions in navigable waters of the U.S., a Letter of Permission authorizing these impacts must be obtained from the USACE under Section 10 of the Rivers and Harbors Act.

Project Applicability: The Plan area does not overlap with current Section 10 waters. We verified that the Plan area includes Historical Section 10 waters by reviewing maps of historical sloughs, which are depicted on historical maps with a double-blue line[1] (San Francisco Estuary Institute 2016). Historical sloughs intersect the easternmost corner of the Plan area near Tasman Drive; coordination with the USACE may be necessary to determine whether any approvals related to the Rivers and Harbors Act are necessary for future activities in that area.

3.1.3 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or *take*, which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." *Take* can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as *take* even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project.

Project Applicability: The aquatic habitat within the Eastside Drainage Swale has no direct hydrological connection to the Guadalupe River, where the federally threatened Central California Coast steelhead (*Oncorhynchus mykiss*) occurs. No federally listed or candidate plant or animal species occur in the Plan area or in adjacent areas that could be substantially impacted by proposed activities under the Plan.

3.1.4 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from the NMFS, establish

[1] The dataset used to determine the extent of historical sloughs integrates several sources of data describing the historical features of tidal marshes in the region, and was developed by the San Francisco Estuary Institute (2016). The primary source is the maps of the United States Coast Survey (later US Coast and Geodetic Survey), a federal agency renowned for the accuracy and detail of its 19th-century maps of America's shoreline. In most parts of the country, these maps provide the best early pictures of coastal and estuarine habitats prior to substantial Euro-American modification.

Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

Project Applicability: The aquatic habitat within the Eastside Drainage Swale has no direct hydrological connection to the Guadalupe River, and no fish species subject to FMPs or other EFH are present in this swale. Therefore, no EFH will be impacted by development activities under the Plan.

3.1.5 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests; and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

Project Applicability: All native bird species that occur in the Plan area are protected under the MBTA.

3.2 State Regulations

3.2.1 Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority to regulate activities that could result in a discharge of dredged or fill material comes from the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne).

Porter-Cologne broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. Moreover, the San Francisco Bay Region RWQCB's Assistant Executive Director has stated that, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters and urbanized areas, jurisdiction is taken to the top of bank. The SWRCB has recently developed *a Preliminary Draft Water Quality Control Policy* that addresses numerous policy elements including development of a wetland definition and description of methodology to be used in defining wetlands as part of waters of the state (SWRCB 2013).

Pursuant to Section 401 of the CWA, projects that are regulated by the USACE must obtain a Water Quality Certification from the RWQCB. This certification ensures that the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne Water Quality Act, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

Project Applicability: In the Plan area, waters of the state include all potential waters of the U.S., including the Eastside Drainage Swale and the perennial freshwater wetlands it supports. The RWQCB is likely to assert jurisdiction up to the top of bank lines on each side of the swale (Figure 3). It should be noted that several trees are rooted in the banks of the swale, and the RWQCB will also extend their jurisdiction to the landward edges of riparian trees.

3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in *take* of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of *take* under the California Fish and Game Code. The CDFW, however, has interpreted *take* to include the "killing of a member of a species which is the proximate result of habitat modification."

Project Applicability: No suitable habitat for any state-listed plant or animal species occurs in the Plan area, and thus no state-listed plants or animals are reasonably expected to occur in the Plan area. Several state-listed species may occur in wetlands and aquatic habitats adjacent to the Plan area, but as described in Table 1, none occur on the site itself, and none will be impacted by development activities within the Plan area.

3.2.3 California Environmental Quality Act

CEQA is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. CEQA requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA known as the State CEQA Guidelines.

Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in the FESA and the CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists". Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

The CNPS, a non-governmental conservation organization, has developed CRPRs for plant species of concern in California in the CNPS Inventory of Rare and Endangered Plants. The CRPRs include lichens, vascular, and non-vascular plants, and are defined as follows:

- CRPR 1A Plants considered extinct.
- CRPR 1B Plants rare, threatened, or endangered in California and elsewhere.
- CRPR 2A Plants considered extinct in California but more common elsewhere.
- CRPR 2B Plants rare, threatened, or endangered in California but more common elsewhere.
- CRPR 3 Plants about which more information is needed - review list.
- CRPR 4 Plants of limited distribution-watch list.

The CRPRs are further described by the following threat code extensions:

- .1—seriously endangered in California;
- .2—fairly endangered in California;
- .3—not very endangered in California.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing as CRPR 1B or 2 are, in general, considered to meet CEQA's Section 15380 criteria, and adverse effects to these species may be considered significant. Impacts on plants that are listed by the CNPS on CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those of CRPR 1B or 2, impacts on them are less frequently considered significant.

Compliance with CEQA Guidelines Section 15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of "special concern" are tracked in Rarefind (CNDDB 2016). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas S rankings are a reflection of the condition of a habitat within California. If an alliance is marked as a G1–G3, all of the associations within it would also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program's currently accepted list of vegetation alliances and associations (CDFW 2010).

Project Applicability: All potential impacts on biological resources will be considered during CEQA review of the Plan in the context of this Biological Resources Report. Project impacts are discussed in Section 6 below.

3.2.4 California Fish and Game Code

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A *stream* is defined in Title 14, California Code of Regulations Section 1.72, as "a body of water that follows at least periodically or intermittently through a bed or channel having banks and that supports fish and other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Using this definition, CDFW extends its jurisdiction to encompass riparian habitats that function as a part of a watercourse. California Fish and Game Code Section 2786 defines *riparian habitat* as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, CDFW would claim jurisdiction over a stream's bed and bank. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code Section 1603, CDFW regulates any project proposed by any person that will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds." California Fish and Game Code Section 1602 requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake. If CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Certain sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered *take* by the CDFW. Raptors (i.e., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Bats and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered *take* by the CDFW.

Project Applicability: CDFW jurisdiction under Section 1602 of the California Fish and Game Code may extend up to the tops of bank of the Eastside Drainage Swale. In areas where riparian tree canopies extend above the top of bank, the landward canopy edge will demarcate the lateral limit of CDFW jurisdiction. Impacts on these areas would require a LSAA. Most native bird, mammal, and other wildlife species that occur in the Plan area and in the immediate vicinity are protected by the California Fish and Game Code.

3.2.5 State Water Resources Control Board Stormwater Regulation

Construction Phase. Construction projects in California causing land disturbances that are equal to 1 ac or greater must comply with State requirements to control the discharge of stormwater pollutants under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order No. 2009-0009-DWQ). Prior to the start of construction/demolition, a Notice of Intent must be filed with the SWRCB describing the project. A Storm Water Pollution Prevention Plan must be developed and maintained during the project and it must include the use of Best Management Practices (BMPs) to protect water quality until the site is stabilized.

Standard permit conditions under the Construction General Permit requires that the applicant utilize various measures including: on-site sediment control best management practices, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors. Additionally, the Construction General Permit does not extend coverage to projects if stormwater discharge-related activities are likely to jeopardize the continued existence, or result in take of any federally-listed endangered or threatened species.

Post Construction Phase. In many Bay Area counties, including Santa Clara County, projects must also comply with the California RWQCB, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (MRP) (Water Board Order No. R2-2009-0074). This permit requires that all projects implement Best

Management Practices and incorporate Low Impact Development practices into the design that prevents stormwater runoff pollution, promotes infiltration, and holds/slows down the volume of water coming from a site. In order to meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

Project Applicability. The Plan and projects included in the Plan will comply with the requirements of the NPDES permit thus, construction phase activities would not result in detrimental water quality effects upon biological/regulated resources. Additionally, the projects included in the Plan must comply with the MRP for design of appropriate stormwater treatment facilities and incorporate feasible Low Impact Development practices. Given the currently existing, older commercial infrastructure that dominates the Plan area, this will likely result in substantial improvements to stormwater treatment and flows off of the site.

3.3 Local Regulations

3.3.1 City of Santa Clara Tree Protection Policies

The City of Santa Clara claims jurisdiction over all trees growing along public streets and in public places (City of Santa Clara Municipal Code, Chapter 12.35). These "protected" trees may not be removed or topped unless a written permit from the superintendent of streets has been obtained. Earthwork (e.g., grading and trenching) in the vicinity of the root zones of protected trees also requires authorization. Projects proposing impacts to protected trees may be required to implement precautionary measures during site construction to limit adverse environmental effects, such as erosion control and water retention. At a minimum, protection requires installation of an open material (e.g., chain link) fence 6 ft in height around the drip line and maintenance of the existing grade level around a tree and out to its drip line.

The General Plan also affords protection to City-designated heritage trees listed in Appendix 8.10 of the General Plan (see Conservation Policy 5.10.1-P3 in Chapter 5). Under the General Plan, "all healthy cedars, redwoods, oaks, olives, bay laurels, and pepper trees of any size, as well as all other trees over 36 inches in circumference measured from 48 inches above-grade, located on both private and public property as well as in the public right-of-way", are designated as heritage trees (see Conservation Policy 5.10.1-P4 in Chapter 5). Furthermore, the General Plan includes a policy for providing opportunities to increase the number of trees in the community through requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed (see General Land Use Policy 5.3.1-P10 in Chapter 5).

Project Applicability: The Plan has the potential to impact trees that are protected under the City of Santa Clara Municipal Code and General Plan. No trees listed in the City's Heritage Tree Inventory are present within the Plan area (see Appendix 8.10 of the General Plan); however, redwoods (*Sequoia sempervirens*), European olives (*Olea europaea*), and trees with a 36-inch circumference or greater in the Plan area may be considered heritage trees. An arborist report and/or tree survey of the Plan area would be necessary to determine the true extent of impacts to protected and heritage trees. Authorization from the City for tree removal, topping, or earthwork

in the vicinity of the root zones of protected and heritage trees may be required prior to construction activities, and mitigation for removing protected trees may be required by the City.

3.3.2 City of Santa Clara 2010–2035 General Plan

Chapter 5 of the General Plan (City of Santa Clara 2010) includes the following goals and policies related to the conservation of biological resources:

- *5.10.1-G1*: The protection of fish, wildlife, and their habitats, including rare and endangered species.
- *5.10.1-G2*: Conservation and restoration of riparian vegetation and habitat.
- *5.10.1-P1*: Require environmental review prior to approval of any development with the potential to degrade the habitat of any threatened or endangered species.
- *5.10.1-P2*: Work with the Santa Clara Valley Water District (SCVWD) and require that new development follow the "Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County" (SCVWD 2007).
- *5.10.1-P3*: Require preservation of all City-designated heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan.
- *5.10.1-P4*: Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.
- *5.10.1-P5*: Encourage enhancement of land adjacent to creeks in order to foster reinstatement of natural riparian corridors where possible.
- *5.3.1-P10*: Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
- *5.10.1-P11*: Require use of native plants and wildlife-compatible nonnative plants, when feasible, for landscaping on City property.
- *5.10.1-P12*: Encourage property owners and landscapers to use native plants and wildlife-compatible nonnative plants, when feasible.

Project Applicability: The General Plan is currently in effect in Santa Clara, and includes all portions of the Plan area. Therefore, the Plan will remain consistent with the General Plan's goals and policies. The Environmental Impact Report for the General Plan (City of Santa Clara 2011) evaluated the impacts of the General Plan on biological resources, including potential adverse effects of development but also taking into consideration the

aforementioned goals and policies of the General Plan related to the protection and enhancement of biological resources.

Section 4. Environmental Setting

4.1 General Project Area Description

The 46.16-ac Plan area is located in the City of Santa Clara in Santa Clara County, California (Figure 1). Climate normals from 1981 to 2010 indicate that the Plan area receives 14.9 inches of precipitation, with the majority falling between the months of October and April, and temperatures range from 50.0 ºF to 69.9 ºF (PRISM Climate Group 2016). Elevations on the site range from 3 ft at the northeast corner to 13 ft at the southwest corner[2] (Google Inc. 2016). The Natural Resource Conservation Service (NRCS) has mapped two soil units on the Plan area: (1) Urbanland-Clear Lake complex, 0–2% slopes, rarely flooded, and (2) Elder fine sandy loam (NRCS 2016). The Urbanland-Clear Lake complex is found on basin floors, and is composed of disturbed and human transported material (Urbanland soil series), and silty clay soil derived from metamorphic and sedimentary rock, or metavolcanics (Clear Lake series). This soil may be slightly saline, and is rated as hydric (NRCS 2016). The Elder series (rarely flooded) occurs in streams, the fine sandy loam soil is derived from metamorphic and sedimentary rock, or metavolcanics, and it may be slightly saline.

4.2 Biotic Habitats

Reconnaissance-level surveys identified four habitat types/land uses in the Plan area: developed/landscaped (43.02 ac), ruderal grassland (2.70 ac), perennial freshwater wetland (0.39 ac), and mixed riparian woodland (0.05 ac) (Figure 3). These habitat types/land uses are described in detail below. Plant species observed during the reconnaissance survey are listed in Appendix B.

4.2.1 Developed/Landscaped

Vegetation. The Plan area is overwhelmingly dominated by existing developed land uses and landscaped areas, which occupy more than 93 percent of the Plan area (Figure 3). Development in the Plan area includes office buildings, businesses, and hardscape such as paved asphalt parking lots and roadways (Photo 2, Appendix A). Landscaped areas have been planted with ornamental trees, such as eucalyptus (*Eucalyptus* sp.), acacia (*Acacia* sp.), European olive, and London plane (*Platanus hybrida*) (Photo 2, Appendix A). English ivy (*Hedera helix*) was also observed in landscaped areas, and is considered to be a "highly" invasive species according to the California Invasive Plant Council (Cal-IPC) (2016). Highly invasive species have the potential to cause severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment, and most are widely distributed ecologically (Cal-IPC 2016). English ivy exhibits a vining habit and can strangle trees and shrubs, and is an especially aggressive invader as it can spread vegetatively if stems are left in contact with moist soil.

[2] Elevations as per the Earth Gravitational Model of 1996 and as shown on Google Earth 2016.

Wildlife. Wildlife species that are associated with the developed/landscaped areas in the Plan area are those that are tolerant of periodic human disturbances, including introduced species such as the European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). Numerous common, native species are also able to utilize these habitats, especially landscaped areas, including the western fence lizard (*Sceloporus occidentalis*), striped skunk (*Mephitis mephitis*) and a variety of birds, including the Anna's hummingbird (*Calypte anna*), California towhee (*Melozone crissalis*), bushtit (*Psaltriparus minimus*), chestnut-backed chickadee (*Poecile rufescens*), and California scrub-jay (*Aphelocoma californica*). In addition, the eaves and corners of the buildings in the Plan area may be attractive to other nesting and/or roosting bird species in the area, such as the black phoebe (*Sayornis nigricans*). Large nonnative trees within the Plan area provide potential nesting sites for raptors, especially Cooper's hawks (*Accipiter cooperii*), and palm trees on the site provide potential nesting sites for barn owls (*Tyto alba*), although no nests of raptors were observed on the site during the focused survey.

4.2.2 Ruderal Grassland

Vegetation. Ruderal grassland habitat in the Plan area occurs above the ordinary high water lines of the Eastside Drainage Swale, and continues upslope to the top of the levee that runs between the swale and the Guadalupe River (Photo 3, Appendix A). Additional ruderal grassland areas were mapped adjacent to buildings in the northeastern corner of the Plan area. This habitat type is dominated by non-native grasses such as wild oat (*Avena* sp.), bentgrass (*Agrostis* sp.), and smilo grass (*Stipa mileacea* var. *mileacea*), and weedy forbs such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Helminthotheca echioides*), and bull mallow (*Malva nicaeensis*). During the December 2016 survey, many of these ruderal species had senesced from the previous growing season, and some were in the germination and juvenile phenological stages. Wild oat and black mustard are considered moderately invasive by the Cal-IPC, and fennel is ranked as highly invasive. It should also be noted that plants in the general *Phalaris* were noted during the December 2016 survey but could not be identified to species, and it is possible that bulbous canary-grass (*Phalaris aquatica*), which is ranked as moderately invasive by the Cal-IPC, may be present.

Wildlife. Wildlife use of grasslands in the Plan area is limited by human disturbance, the small extent of the grassland area, and the isolation of these habitat remnants from more extensive grasslands. As a result, some of the wildlife species associated with extensive grasslands in the South Bay, such as the grasshopper sparrow (*Ammodramus savannarum*), are absent from the patches of grassland within the Plan area. Many of the species that occur in the small grassland areas within the Plan area occur primarily in adjacent urban areas and use these grasslands for foraging. Such species include the house finch (*Haemorhous mexicanus*), bushtit, and lesser goldfinch (*Spinus psaltria*), which forage on seeds in ruderal areas, and the black phoebe, cliff swallow (*Petrochelidon pyrrhonota*), and Mexican free-tailed bat (*Tadarida brasiliensis*), which forage aerially over ruderal habitats for insects.

California ground squirrels were not observed within the Plan area during the survey, although several old ground squirrel burrows were present on the Guadalupe River levee within the Plan area. The majority of the ruderal grassland habitat located west of the Eastside Drainage Swale was underlain with gravel, and likely does

not provide high-quality habitat for ground squirrels. Ground squirrels are an important component of grassland communities, providing a prey base for diurnal raptors and terrestrial predators, as well as nesting and roosting habitat for burrowing owls. Other rodent species that can potentially occur in the ruderal grassland habitat in the Plan area include the California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), and deer mouse (*Peromyscus maniculatus*). Diurnal raptors such as red-tailed hawks (*Buteo jamaicensis*) and Cooper's hawks forage for these small mammals over grasslands during the day, and at night nocturnal raptors, such as barn owls, will forage for nocturnal rodents, such as deer mice.

Mammals such as the native striped skunk and raccoon (*Procyon lotor*) and nonnative Virginia opossum (*Didelphis virginiana*) and feral cat (*Felis catus*) utilize ruderal habitats in the Plan area for foraging. Reptiles such as western fence lizards, western skinks (*Plestiodon skiltonianus*), western terrestrial garter snakes (*Thamnophis elegans*), and southern alligator lizards (*Elgaria multicarinata*) frequent grassland habitats, and may occur in grassland habitats or adjacent developed habitats in the Plan area.

4.2.3 Perennial Freshwater Wetland

Vegetation. The Eastside Drainage Swale was constructed in 1971 to be a stormwater run-off conveyance for businesses along Calle del Mundo and Calle de Luna, and for the Fairway Glen neighborhood in the City of Santa Clara. It is approximately 25 ft wide and flows south to north from the Tasman Drive overcrossing of the Guadalupe River and extends approximately 3,780 ft before it empties into the Eastside Storm Retention Basin at 5611 Lafayette Street. The swale does not exhibit a direct or unmodified hydrological connection to the Guadalupe River or any other tributary, though waters from the Eastside Retention Basin (into which the swale flows) are pumped into the Guadalupe River. Based on historical aerial photographs from 1948 to the present day, the swale appears to have been excavated in uplands and does not relocate a naturally occurring tributary (NETR 2016).

During the December 2016 survey, several inches of water were present in the swale, and perennial freshwater wetlands were mapped along the entire length of the swale that intersects the Plan area (approximately 810 linear ft). Wetlands in the swale are composed of dense vegetation, and were co-dominated by California bulrush and cattail (Photo 4, Appendix A), which are "obligate" plant species that occur in wetlands 99 percent of the time (Lichvar et al. 2016), and typically occur in areas with perennial or long (several months or more) seasonal hydroperiods.

Wildlife. The freshwater wetland habitat within the Eastside Drainage Swale supports a diverse assemblage of wildlife species. The heavily urbanized context of the Plan area, long history of human disturbance, and other urban-associated pressures on wildlife populations limit the value of this habitat to wildlife, but this wetland provides habitat for several waterbird species. The sora (*Porzana carolina*) and Virginia rail (*Rallus limicola*) forage in freshwater marshes such as this during migration and in winter. Passerine species that breed in freshwater wetlands in the Plan area include the marsh wren (*Cistothorus palustris*), song sparrow (*Melospiza melodia*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), and red-winged blackbird (*Agelaius phoeniceus*), and several sparrow species and other birds are expected to forage in this habitat as well, particularly during

migration and in winter. Amphibians such as the Sierran chorus frog (*Pseudacris sierrae*), bullfrog (*Lithobates catesbeianus*), and western toad (*Anaxyrus boreas*) may also breed in this habitat.

4.2.4 Mixed Riparian Woodland

Vegetation. Several riparian trees and shrubs, such as blue elderberry (*Sambucus nigra* ssp. *caerulea*) and Fremont cottonwood (*Populus fremontii*), are rooted in the banks of the Eastside Drainage Swale and contribute allocthonous material to the swale (Photos 5 and 6, Appendix A). Mixed riparian woodland habitat in the Plan area was mapped along the canopy edges of this woody vegetation.

Wildlife. Riparian habitats typically support high wildlife diversity because of the multilayered vegetation, presence of water, and abundance of invertebrate prey. However, the mixed riparian woodland within the Plan area is extremely sparse, discontinuous, and limited in extent, and provides only very limited resources for wildlife. Riparian specialists, such as the yellow warbler (*Setophaga petechia*) and Pacific-slope flycatcher (*Empidonax difficilis*), are not expected to nest or occur regularly in this habitat, but may forage in the riparian trees in the Plan area occasionally during migration. The majority of wildlife species that use the mixed riparian woodland habitat regularly are those that are primarily associated with the adjacent developed/landscaped habitat and perennial freshwater wetlands, described above.

4.3 Adjacent Habitat Areas

The Plan area is adjacent to the Guadalupe River, which provides breeding and foraging habitat for many species of waterbirds and wetland-associated birds. A review of "birding hotspots" in the immediate Plan area vicinity indicates that approximately 80 species of birds have been recorded along the Guadalupe River in Santa Clara (Cornell Lab of Ornithology 2016). The majority of these species are common resident, migrant, or wintering wading birds, waterfowl, and passerines (i.e., songbirds). Representative waterbirds in this area include the mallard (*Anas platyrhynchos*), California gull (*Larus californicus*), and Canada goose (*Branta canadensis*), and representative landbirds in this area include several species of swallows, the red-winged blackbird, yellow-rumped warbler (*Setophaga coronata*), golden-crowned sparrow (*Zonotrichia atricapilla*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow, and American robin (*Turdus migratorius*). Other common foragers along the Guadalupe River are the great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*).

Ulistac Natural Area is an approximately 40-ac park located just south of the Plan area along the Guadalupe River and Lick Mill Boulevard between Tasman Drive and Montague Expressway. The park has been planted with native habitats including oak savanna, oak woodland, grassland, coastal scrub, and riparian forest. The park also contains areas of wetlands as well as a bird and butterfly garden, and the park's location along the Guadalupe River connects these planted habitats with other natural areas in the region (e.g., riparian habitats upstream and marsh habitats downstream). More than 140 species of birds are known to occur at Ulistac including resident and migrant waterbirds, raptors, and landbirds, and the park is a local bird hotspot with the highest number of bird species observed by birdwatchers compared to any other site in Santa Clara (Cornell

Lab of Ornithology 2016, South Bay Birds List-Serve), including those that occur along the Guadalupe River as well as many additional species of passerines. In the context of highly urbanized Santa Clara, Ulistac represents a valuable area of native habitat that is important to the City's populations of resident and migrating birds.

4.4 Wildlife Movement

Wildlife movement within and in the vicinity of the Plan area takes many forms, and is different for the various suites of species associated with these lands. Bird and bat species move readily over the landscape, foraging over and within both natural lands and landscaped areas of Santa Clara. Mammals of different species move within their home ranges, but also disperse between patches of habitat. Generally, reptiles and amphibians similarly settle within home ranges, sometimes moving to central breeding areas, upland refugia, or hibernacula in a predictable manner, but also dispersing to new areas. Some species, especially among the birds and bats, are migratory, moving into or through the Plan vicinity during specific seasons. Aside from bats, there are no other mammal species in the vicinity of the site that are truly migratory. However, the young of many mammal species disperse from their natal home ranges, sometimes moving over relatively long distances in search of new areas in which to establish.

Movement corridors are segments of habitat that provide linkage for wildlife through the mosaic of suitable and unsuitable habitat types found within a landscape while also providing cover. On a broader level, corridors also function as paths along which wide-ranging animals can travel, populations can move in response to environmental changes and natural disasters, and genetic interchange can occur. In California, environmental corridors often consist of riparian areas along streams, rivers, or other natural features.

4.4.1 Movement by Fish, Mammals, Reptiles, and Amphibians

The Eastside Drainage Swale is not directly connected to streams in the Plan area region, such as the Guadalupe River, or to the open waters of the Bay. Thus, no aquatic species use the Plan area as a movement corridor.

Due to the density of development in the Plan area region and the lack of continuous, well-vegetated pathways through the City, there are currently no well-defined movement corridors for mammals or reptiles within or through the Plan area. Wildlife species may move through the area using cover and refugia as they find them available. However, most dispersal by wildlife species in the region likely occurs along higher-quality habitats, such as the Guadalupe River corridor to the east, and along the edge of the Bay to the north. Nevertheless, the wetland and upland habitats along the Eastside Drainage Swale serve as a limited movement pathway for some terrestrial wildlife species, providing vegetative cover and foraging opportunities. Common, urban-adapted species such as raccoons, striped skunks, and the non-native Virginia opossum may use the vegetation along the swale to move north and south through the Plan area.

In summary, the Plan area is not a particularly important area for movement by non-flying wildlife, and it does not contain any high-quality corridors allowing dispersal of such animals through the City. However, the

Guadalupe River located immediately east of the site provides a corridor for wildlife species to disperse north and south through the City.

4.4.2 Pacific Flyway Stopover

Due to its primarily developed nature, small size, and the predominantly non-native vegetation that dominates the Plan area, the site does not provide high-quality habitat for migratory birds in comparison to areas of native vegetation located in more natural areas (e.g., along the Baylands to the north). Nevertheless, the maturity and diversity of the habitat in the Plan area provides food and cover for some migrant songbirds, and immediately adjacent areas such as the Guadalupe River and Ulistac Natural Area do provide important migratory stopover sites for birds.

Section 5. Special-Status Species and Sensitive Habitats

CEQA requires assessment of the effects of a project on species that are protected by state, federal, or local governments as "threatened, rare, or endangered"; such species are typically described as "special-status species". For the purpose of the environmental review of the Project, special-status species have been defined as described below. Impacts on these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3 above.

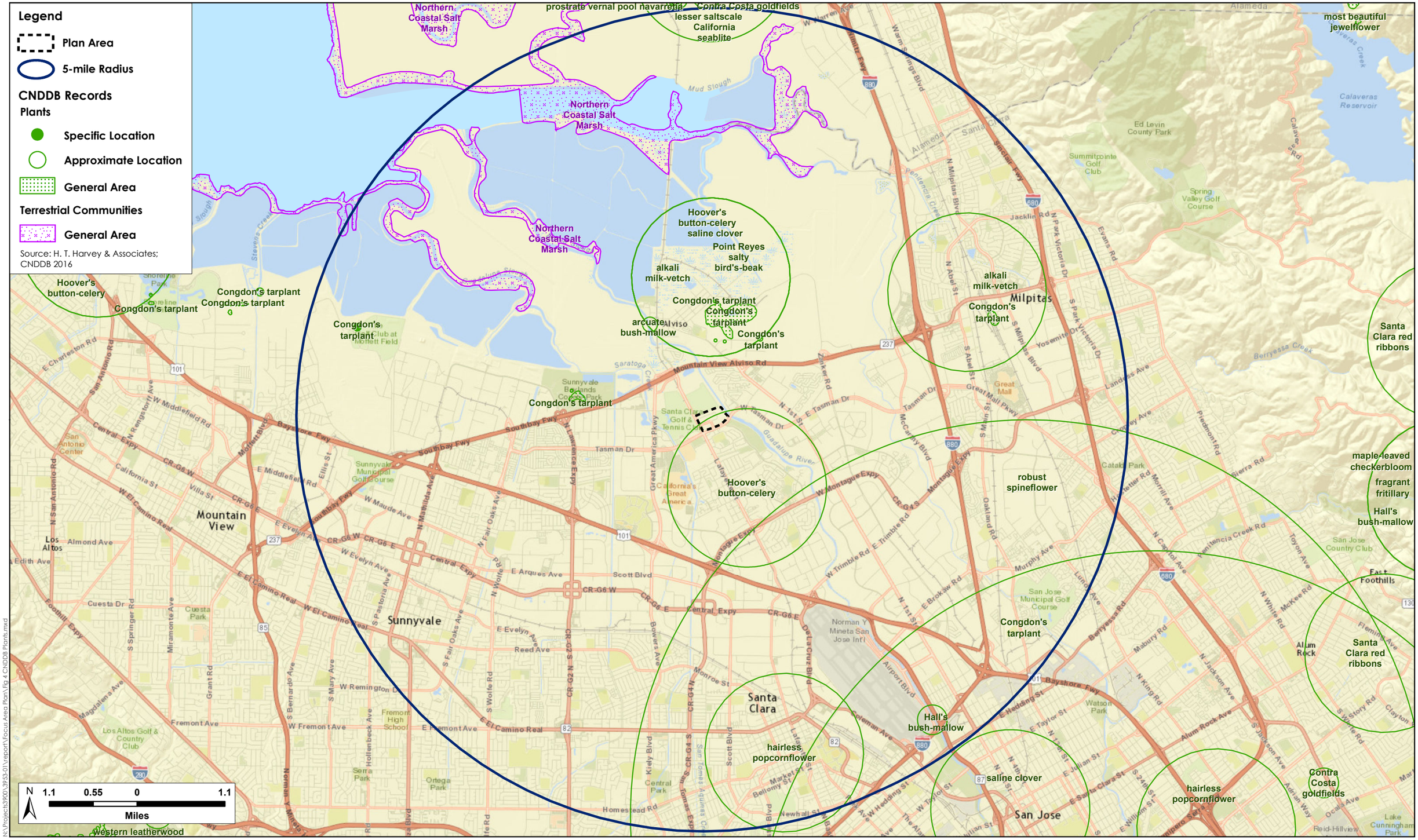
For purposes of this analysis, "special-status" plants are considered plant species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as CRPR 1A, 1B, 2, 3, or 4.

For purposes of this analysis, "special-status" animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515).

Information concerning threatened, endangered, and other special-status species that potentially occur in the study area was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 4 depicts CNDDB records of special-status plant species in the general vicinity of the Project site and Figure 5 depicts CNDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.

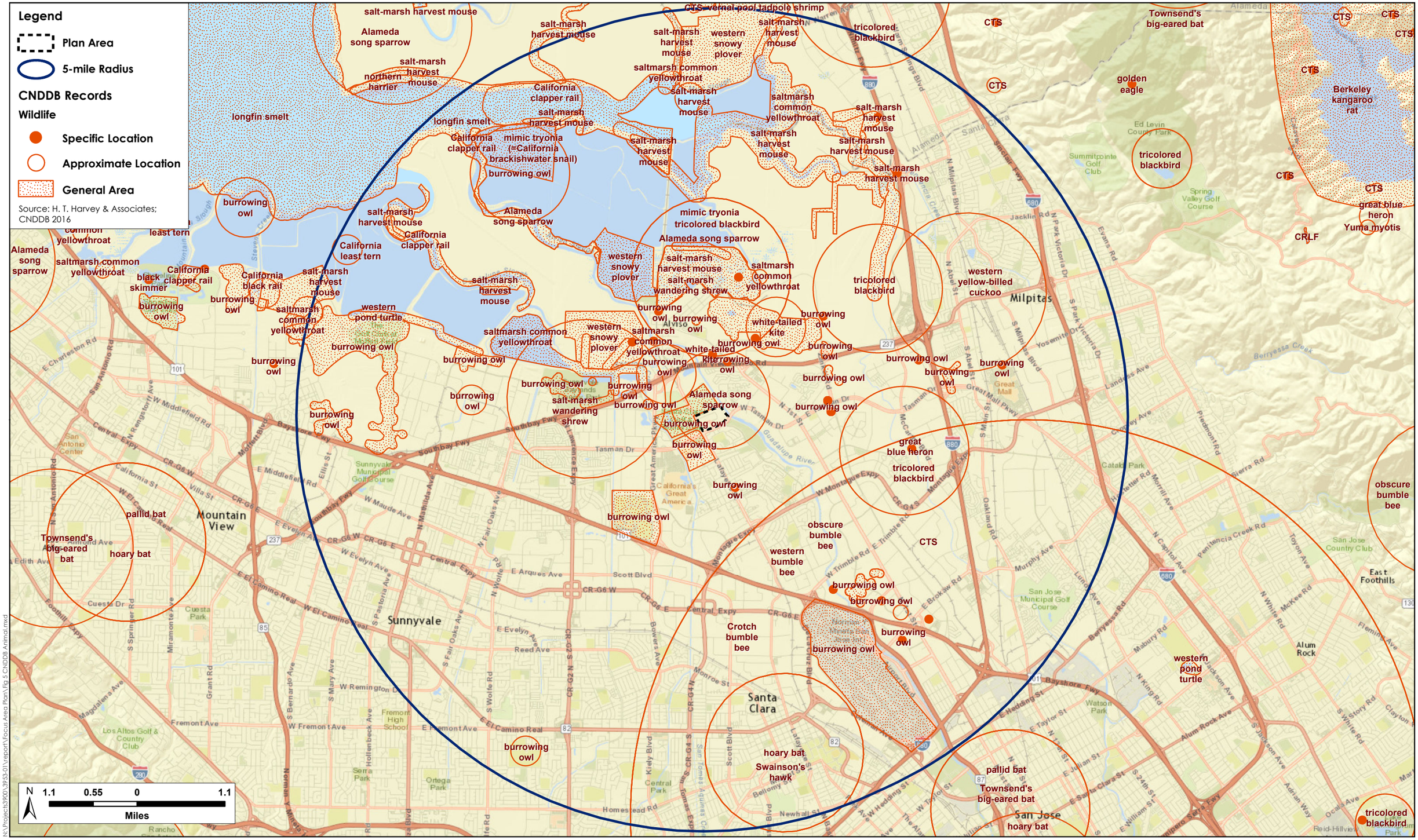


N:\Projects\3900\3953-01\report\Focus Area Plan\Fig 4 CNDDB Plants.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 4. CNDDB Plant Records

Biological Resources Report
Tasman East Focus Area Plan (3953-01)
December 2016



N:\Project\3900\3953-01\report\Focus Area Plan\Fig 5 CNDDB Animal.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 5. CNDDB Animal Records

Biological Resources Report
Tasman East Focus Area Plan (3953-01)
December 2016

5.1 Special-status Plant Species

The CNPS (2016) and CNDDB (2016) identify 71 special-status plant species as potentially occurring in at least one of the nine USGS 7.5-minute quadrangles containing or surrounding the Plan area for species in CRPR 1 and 2, or in Santa Clara County for CRPR 3 and 4 species. The majority of potentially occurring special-status plant species were determined to be absent from the Plan area for at least one of the following reasons: (1) absence of suitable habitat types; (2) lack of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range on the Plan area; and/or (4) the species is presumed extirpated from the Plan region. Appendix C lists these plants along with the basis for the determination. Suitable habitat, edaphic requirements, and elevation range were present on the Plan area for one plant species, Congdon's tarplant. Congdon's tarplant has been documented by the CNDDB in the Plan area vicinity (Figure 4) and can persist in disturbed grasslands. An expanded discussion on this species is provided below.

5.1.1 California Native Plant Society Ranked Plant Species

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*). Federal Listing Status: None; State Listing Status: None; CNPS: 1B.1. Congdon's tarplant is an annual herb in the composite family (Asteraceae) that is endemic to California. It has a variable blooming period extending from May through November. Congdon's tarplant occurs in valley and foothill grassland habitat, floodplains, and swales, particularly those with alkaline substrates; and in disturbed areas with non-native grasses such as wild oat, ripgut brome (*Bromus diandrus*), Italian ryegrass (*Festuca perenne*), and seaside barley (*Hordeum marinum*) (CNDDB 2016, CNPS 2016, Baldwin et al. 2012, and SCVWD 2011). Congdon's tarplant occurs in Alameda, Contra Costa, Monterey, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, and Solano counties (CNDDB 2016). Five extant populations have been recorded in the CNDDB (2016) as occurring in the Plan area vicinity. To the north of the Plan area in Alameda County, west of Cushing Parkway, populations are located within the boundaries of the Don Edwards NWR in the Pacific Commons Preserve, near a complex of vernal pools that were created circa 1998; and in an urban area surrounded by commercial development. Additional populations in the Plan vicinity occur in Santa Clara County. Two are located in Sunnyvale, situated on the eastern edge of a hard packed gravel road atop a levee that runs alongside Stevens Creek, and in California annual grassland and seasonal wetland habitats within Sunnyvale Baylands Park. Another population is located in Alviso, to the north of Highway 237 and east of North First Street in annually disked ruderal grassland.

As described above, a focused survey for Congdon's tarplant was conducted by H. T. Harvey & Associate plant ecologist, Maya Goklany, M.S. on December 13, 2016, and no individual plants of this species (*Centromadia parryi*), including the *congdonii* subspecies, were detected in the Plan area at this time (see Section 2.2 for detailed survey methods). Congdon's tarplant is therefore determined to be absent from the Plan area.

5.2 Special-status Animal Species

The legal status and likelihood of occurrence in the Plan area of special-status animal species known to occur, or potentially occurring, in the Project region are presented in Table 1. Most of the special-status species listed in Table 1 are not expected to occur in the Plan area because it lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development or otherwise unsuitable habitat.

The following special-status species that are present in less urbanized settings in the South Bay, or in specialized habitats in the South Bay, are absent from the Plan area due to a lack of suitable habitat and/or isolation of the site from populations by urbanization: the California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk (*Buteo swainsoni*), California Ridgway's rail (*Rallus obsoletus obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), western snowy plover (*Charadrius alexandrinus nivosus*), California least tern (*Sterna antillarum browni*), salt marsh harvest mouse (*Reithrodontomys raviventris*), northern harrier (*Circus cyaneus*), golden eagle (*Aquila chrysaetos*), loggerhead shrike (*Lanius ludovicianus*), Alameda song sparrow (*Melospiza melodia pusillula*), grasshopper sparrow (*Ammodramus savannarum*), Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), yellow-breasted chat (*Icteria virens*), salt marsh wandering shrew (*Sorex vagrans halicoetes*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), Townsend's big-eared bat (*Corynorhinus townsendi*), American badger (*Taxidea taxus*), and California brown pelican (*Pelecanus occidentalis californicus*).

The Plan area is located adjacent to the Guadalupe River, which provides habitat for several special-status fish species, including the Central California Coast steelhead and the Central Valley Fall-run Chinook salmon (*Oncorhynchus tshawytscha*). In addition, the green sturgeon (*Acipenser medirostris*) and longfin smelt (*Spirinchus thaleichthys*) occur in tidal waters downstream in Alviso Slough. However, the Eastside Drainage Swale has no direct hydrologic connection to the Guadalupe River or tidal waters of the San Francisco Bay, and instead flows north into the Eastside Storm Retention Basin. Therefore, special-status fish species that could occur in the Guadalupe River or downstream in tidal waters of the Bay, will not be affected by development activities within the Plan area, and they are not discussed further in this report.

Two state fully protected species, the American peregrine falcon (*Falco peregrinus anatum*) and white-tailed kite (*Elanus leucurus*), could occasionally occur in the Plan area as non-breeding foragers. The pallid bat (*Antrozous pallidus*), a California species of special concern, may also forage aerially over habitats in the Plan area. These species are not expected to nest, roost, or breed in or immediately adjacent to the Plan area (though the white-tailed kite may nest nearby at the Ulistac Natural Area), and will be affected very little, if at all, by proposed development under the Plan. In addition, the yellow warbler (*Setophaga petechia*), a bird species that is considered a California species of special concern when it is breeding, may occur occasionally in trees or other vegetation on the site itself as a nonbreeding transient, forager, or migrant, but no suitable nesting habitat for this species occurs in the Plan area. Because this species is only considered a species of special concern when nesting, it is not a "special-status species" when it occurs as a nonbreeding visitor to the Plan area.

Table 1. Special-status Animal Species, Their Status, and Potential Occurrence in the Study Area

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Federal or State Endangered, Threatened, or Candidate Species			
Green sturgeon (*Acipenser medirostris*)	FT, CSSC	Spawns in large river systems such as the Sacramento River; forages in nearshore oceanic waters, bays, and estuaries.	**Absent.** The Eastside Drainage Swale has no direct hydrologic connection to waters that might support this species, and no suitable habitat is present within the Plan area. This species is determined to be absent from the Plan area.
Longfin smelt (*Spirinchus thaleichthys*)	FC, ST	Spawns in fresh water in the upper end of the San Francisco Bay; occurs year-round in the South Bay.	**Absent.** The Eastside Drainage Swale has no direct hydrologic connection to waters that might support this species, and no suitable habitat is present within the Plan area. This species is determined to be absent from the Plan area.
Central California Coast steelhead (*Oncorhynchus mykiss*)	FT	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.	**Absent.** The Eastside Drainage Swale has no direct hydrologic connection to waters that might support this species, and no suitable habitat is present within the Plan area. This species is determined to be absent from the Plan area.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Vernal or temporary pools in annual grasslands or open woodlands.	**Absent.** Populations located on the Valley floor have been extirpated due to habitat loss, and the species is now considered absent from the majority of the valley floor, including the study area (H. T. Harvey & Associates 1999a, 2012b; SCVWD 2011). No recent records of California tiger salamanders are located anywhere in the Plan area vicinity (CNDDB 2016). Determined to be absent.
California red-legged frog (*Rana draytonii*)	FT, CSSC	Streams, freshwater pools, and ponds with emergent or overhanging vegetation.	**Absent.** This species has been extirpated from the majority of the Plan area region, including the entire urbanized Valley floor, due to development, the alteration of hydrology of its aquatic habitats, and the introduction of non-native predators such as non-native fishes and bullfrogs (H. T. Harvey & Associates 1997; SCVWD 2011). Determined to be absent.
Bald eagle (*Haliaeetus leucocephalus*)	SE, SP	Occurs mainly along seacoasts, rivers, and lakes; nests in tall trees or in cliffs, occasionally on electrical towers. Feeds mostly on fish.	**Absent.** Has been recorded nesting in the Plan area region only at inland reservoirs. No suitable nesting or foraging habitat occurs in the Plan area.
Swainson's hawk (*Buteo swainsoni*)	ST	Nests in trees surrounded by extensive marshland or agricultural foraging habitat.	**Absent.** Suitable foraging habitat is absent from the Plan area, and the species does not breed in the vicinity (Bousman 2007a). This species is determined to be absent.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
California Ridgway's rail (*Rallus obsoletus obsoletus*)	FE, SE, SP	Salt marsh habitat dominated by pickleweed and cordgrass (*Spartina* spp.).	**Absent.** Suitable foraging and breeding habitat for California Ridgway's rails is absent from the Plan area, and Ridgway's rails are not known to occur at inland swales such as the Eastside Drainage Swale. The species has been observed along the Guadalupe River near the Gold Street Bridge (on February 14, 1997; S. Terrill, pers. obs.), but never upstream from there (Cornell Lab of Ornithology 2016, Santa Clara County bird data, unpublished, South Bay Birds List Serve 2016). This species is determined to be absent.
California black rail (*Laterallus jamaicensis coturniculus*)	ST, SP	Breeds in fresh, brackish, and tidal salt marsh.	**Absent.** No salt marsh or brackish marsh habitat occurs within or immediately adjacent to the Plan area, and this species is determined to be absent.
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT, CSSC	Sandy beaches on marine and estuarine shores and salt pans in Bay saline managed ponds.	**Absent.** Not expected to occur within or adjacent to the Plan area owing to a lack of suitable habitat (i.e., lack of sandy beaches/salt pannes).
California least tern (*Sterna antillarum browni*)	FE, SE, SP	Nests along the coast on bare or sparsely vegetated, flat substrates. In the South Bay, nests in salt pans and on an old airport runway. Forages for fish in open waters.	**Absent**. Not expected to occur within or adjacent to the Plan area owing to a lack of suitable nesting habitat (i.e., lack of salt pannes, bare or sparsely vegetated areas free from human disturbance), foraging habitat (e.g., managed ponds, open Bay), or roosting habitat (e.g., levees).
Salt marsh harvest mouse (*Reithrodontomys raviventris*)	FE, SE, SP	Salt marsh habitat dominated by common pickleweed or alkali bulrush.	**Absent.** Suitable pickleweed-dominated salt marsh or bulrush-dominated brackish marsh providing breeding or foraging habitat for this species is absent from the Plan area and its immediate vicinity.
California Species of Special Concern			
Central Valley fall-run Chinook salmon (*Oncorhynchus tshawytscha*)	CSSC	Cool rivers and large streams that reach the ocean and that have shallow, partly shaded pools, riffles, and runs.	**Absent.** The Eastside Drainage Swale has no direct hydrologic connection to waters that might support this species, and no suitable habitat is present within the Plan area. This species is determined to be absent from the Plan area.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Western pond turtle (*Actinemys marmorata*)	CSSC	Permanent or nearly permanent water in a variety of habitats.	**May be Present.** The Eastside Drainage Swale is vegetated with dense California bulrush and cattails, and provides only marginal dispersal habitat for pond turtles. Further, breeding populations of western pond turtles have been extirpated from most agricultural and urbanized areas in the region. Although individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley, no known populations of western pond turtles occur in the Eastside Drainage Swale or nearby areas, and the species is not expected to nest in the Plan area or occur there regularly. Nevertheless, it is possible that occasional pond turtles from populations in freshwater habitats upstream in the Guadalupe River could potentially disperse downstream to the Plan area, although they are expected to do so in extremely small numbers, if at all.
Northern harrier (*Circus cyaneus*)	CSSC (nesting)	Nests in marshes and moist fields, forages over open areas.	**Absent.** No suitable open grassland foraging areas are present in the Plan area. This species is determined to be absent.
Burrowing owl (*Athene cunicularia*)	CSSC	Nests and roosts in open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	**May be Present.** Burrowing owls have been documented historically in the vicinity of the Plan area (CNDDB 2016), and are known to have occurred more recently at the All Purpose Landfill approximately 0.4 mi to the north and near Levi's Stadium approximately 0.5 mi to the southwest. However, there are no records of burrowing owls within the Plan area, and high levels of disturbance likely preclude the presence of this species. Nevertheless, the ruderal grasslands within the Plan area provide ostensibly suitable nesting, foraging, and roosting habitat for burrowing owls, and owls from nearby areas may use burrows within the Plan area and may occasionally forage and roost there.
Loggerhead shrike (*Lanius ludovicianus*)	CSSC (nesting)	Nests in tall shrubs and dense trees; forages in grasslands, marshes, and ruderal habitats.	**Absent.** Nests in a number of locations around the South Bay where open grassland, ruderal, or agricultural habitat with scattered brush, chaparral, or trees provides perches and nesting sites (Bousman 2007b), though populations have declined in recent years as suitable habitat has been increasingly developed. This species is not expected to occur within or near the Plan area due to the limited extent of open habitat.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Yellow warbler (*Setophaga petechia*)	CSSC (nesting)	Nests in riparian woodlands.	**Absent as Breeder.** Suitable riparian nesting habitat for the yellow warbler is not present on or immediately adjacent to the Plan area. The species may occur on the site only as a migrant. Because this species is only a species of special concern while nesting, individuals occurring in the Plan area during migration would not be considered to have special status.
San Francisco common yellowthroat (*Geothlypis trichas sinuosa*)	CSSC	Nests in herbaceous vegetation, usually in wetlands or moist floodplains.	**May be Present.** Suitable nesting and foraging habitat for common yellowthroats is present in the freshwater wetland habitat in the Eastside Drainage Swale, and 1-2 pairs of this species may nest and forage within this wetland habitat.
Yellow-breasted chat (*Icteria virens*)	CSSC (nesting)	Nests in dense stands of willow and other riparian habitat.	**Absent.** The yellow-breasted chat is a rare breeder, and only slightly more regular transient, in willow-dominated riparian habitats in the Plan area region. Suitably large, dense stands of riparian habitat are not present on or adjacent to the Plan area. Determined to be absent.
Tricolored blackbird (*Agelaius tricolor*)	CSSC (nesting colony)	Nests near fresh water in dense emergent vegetation.	**Absent as Breeder.** In Santa Clara County, has bred in only a few scattered locations, and is absent from, or occurs only as a nonbreeder in, most of the County (Rottenborn 2007a). Typically nests in extensive stands of tall emergent herbaceous vegetation in non-tidal freshwater marshes and ponds. Although such habitat is present within the Eastside Drainage Swale, this species (whose colonies are loud and conspicuous) has never been recorded breeding in the Plan area, and high levels of adjacent disturbance combined with the small area of available nesting habitat likely preclude nesting by this species. Thus, this species is expected to occur only as a nonbreeding forager.
Alameda song sparrow (*Melospiza melodia pusillula*)	CSSC	Nests in salt marsh, primarily in marsh gumplant and cordgrass along channels.	**Absent as Breeder.** The *pusillula* subspecies of song sparrow is endemic to Central and South San Francisco Bay. This subspecies breeds in the tidal brackish marsh habitat along Alviso Slough to the north. However, suitable salt marsh habitat is absent from the Eastside Drainage Swale and from the Guadalupe River to the east, and thus song sparrows breeding on the Plan area or in adjacent areas along the Guadalupe River are of the widespread, freshwater subspecies *gouldii*. Individuals of several song sparrow subspecies including *pusillula* may occur on the site during migration and winter.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Grasshopper sparrow (*Ammodramus savannarum*)	CSSC (nesting)	Nests and forages in grasslands, meadows, fallow fields, and pastures.	**Absent.** Known to occur in the Plan area region primarily in grasslands and less frequently disturbed agricultural habitats, mostly in the foothills. Suitably extensive grasslands to support nesting or foraging by this species are not present in the Plan area.
Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*)	CSSC	Nests in pickleweed dominant salt marsh and adjacent ruderal habitat.	**Absent.** In the South San Francisco Bay, nests primarily in short pickleweed-dominated portions of diked/muted tidal salt marsh habitat and in adjacent ruderal habitats (Rottenborn 2007b). No suitable nesting or foraging habitat occurs in the Plan area.
Salt marsh wandering shrew (*Sorex vagrans halicoetes*)	CSSC	Medium to high marsh 6 to 8 ft above sea level with abundant driftwood and common pickleweed.	**Absent.** Suitable pickleweed-dominated salt marsh habitat providing breeding or foraging habitat for this species is absent from the Plan area and adjacent areas along the Guadalupe River, and this species is determined to be absent.
Pallid bat (*Antrozous pallidus*)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	**Absent as Breeder.** Historically, pallid bats were likely present in a number of locations throughout the Plan area region, but their populations have declined in recent decades. This species has been extirpated as a breeder from urban areas close to the Bay, as is the case in the Plan area. No high-quality roosting habitat is present in the Plan area, and no known maternity colonies of this species are present on or adjacent to the Plan area. There is a low probability that the species occurs in the site vicinity at all due to urbanization; however, individuals from more remote colonies could potentially forage in the Plan area over open habitats on rare occasions.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSSC	Roosts in caves and mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats.	**Absent.** No known extant populations of the Townsend's big-eared bat occur on the Santa Clara Valley floor. Suitable breeding habitat is not present in the Plan area, and no colonies are known from the site vicinity. Determined to be absent.
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	**Absent.** Currently, with the exception of records along Coyote Creek and along the edges of the Valley, San Francisco dusky-footed woodrats are not known to occur in the more urbanized portions of Santa Clara County (H. T. Harvey & Associates 2010b). Further, no suitable habitat is present on or immediately adjacent to the Plan area. Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
American badger (*Taxidea taxus*)	CSSC	Burrows in grasslands and occasionally in infrequently disked agricultural areas.	**Absent.** Known to occur in the Plan area region primarily in extensive grasslands and agricultural habitats, mostly in the foothills. Suitably extensive grasslands or agricultural habitats are not present within or near the Plan area. Determined to be absent.
State Fully Protected Species			
California brown pelican (*Pelecanus occidentalis californicus*)	SP (nesting colony and communal roosts)	Undisturbed islands near estuarine, marine, subtidal, and marine pelagic waters.	**Absent.** Brown pelicans are uncommon nonbreeding visitors in Santa Clara County. This species occasionally forages in ponds along the Bay, but the Eastside Drainage Swale is too shallow, narrow, and choked with vegetation to provide suitable foraging habitat for this species. Further, brown pelicans are not expected to occur as far inland as the Plan area. Determined to be absent.
American peregrine falcon (*Falco peregrinus anatum*)	SP	Forages in many habitats; nests on cliffs and tall bridges and buildings.	**Absent as Breeder.** Peregrine falcons are known to nest on electrical transmission towers within managed ponds near the Alviso area, but are not known or expected to nest in the Plan area. Nevertheless, the peregrine falcon may occur in the Plan area as an occasional forager, primarily during migration and winter.
Golden eagle (*Aquila chrysaetos*)	SP	Breeds on cliffs or in large trees (rarely on electrical towers), forages in open areas.	**Absent.** Suitable breeding and foraging habitat for golden eagles is not present on, or immediately adjacent to, the Plan area.
White-tailed kite (*Elanus leucurus*)	SP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	**Absent as Breeder.** White-tailed kites are not known to nest or regularly occur at the Santa Clara Golf & Country Club to the north or along the Guadalupe River in the Plan area vicinity. However, it is possible that the species could nest at the Ulistac Natural Area to the south, and occasional individuals may forage in ruderal habitat in the Plan area.

Key to Abbreviations:

Status: Federally Endangered (FE); Federally Threatened (FT); Federal Candidate for Listing (FC); State Endangered (SE); State Threatened (ST); State Fully Protected (SP); California Species of Special Concern (CSSC).

Tricolored blackbirds (*Agelaius tricolor*) have not been recorded nesting in the vicinity of the Plan area or in similar habitat on the Valley floor in many years, and the freshwater wetland habitat in the Eastside Drainage Swale is too narrow and limited in extent to support a nesting colony of this species. Therefore, this species is not expected to breed in the Plan area, and at most it occurs as an uncommon and irregular forager on the site during the nonbreeding period.

The western pond turtle (*Actinemys marmorata*), burrowing owl, and San Francisco common yellowthroat are addressed in greater detail below because these species can potentially breed or occur in or immediately adjacent to the Plan area and/or may be significantly impacted by development under the proposed Plan (see *Impacts and Mitigation Measures* below).

Western Pond Turtle (*Actinemys marmorata*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The western pond turtle occurs in ponds, streams, and other wetland habitats in the Pacific slope drainages of California and northern Baja California, Mexico (Bury and Germano 2008). The central California population was historically present in most drainages on the Pacific slope (Jennings and Hayes 1994), but streambed alterations and other sources of habitat destruction, exacerbated by frequent drought events, have caused substantial population declines throughout most of the species' range (Stebbins 2003). Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component for this species, and western pond turtles do not occur commonly along high-gradient streams. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas up to 0.25 mi from aquatic habitat (Jennings and Hayes 1994). Juveniles feed and grow in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Nesting habitat is typically found within 600 ft of aquatic habitat (Jennings and Hayes 1994), but if no suitable nesting habitat can be found close by, adults may travel overland considerable distances to nest. Threats to the western pond turtle include impacts to nesting habitat from agricultural and grazing activities, human development of habitat, and increased predation pressure from native and non-native predators as a result of human-induced landscape changes.

Although breeding populations of western pond turtles have been extirpated from most agricultural and urbanized areas in the region, individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley. Western pond turtles are unlikely to occur in the Plan area due to the extremely small area of wetland habitat present and adjacent high levels of disturbance associated with development in the Plan area and the Guadalupe River Trail. Further, the Eastside Drainage Swale within the Plan area is densely vegetated with California bulrush and cattails, and no suitable open water foraging habitat or basking habitat for pond turtles is present. Thus, a local population of pond turtles is not expected to regularly use the habitat within the Plan area, although small numbers of individual pond turtles could potentially disperse along the Eastside Drainage Swale and/or nest in nearby upland areas. Suitable basking and foraging habitat for this species occurs in the Guadalupe River to the east, but there are no records of pond turtles in this area and high levels of urbanization in the vicinity likely precludes the presence of a viable population there. Nevertheless, it is possible that individual pond turtles from populations in freshwater habitats upstream in the Guadalupe River could potentially disperse downstream to the Plan area, although they are expected to do so in extremely small numbers, if at all.

Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern. Burrowing owls are a small, terrestrial owls of open country. These owls inhabit annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels; owls use the abandoned burrows of ground squirrels for shelter and nesting. The nesting season as recognized by the CDFW (California Department of Fish and Game 2012) extends from February 1 through August 31. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or they may migrate (Rosenberg et al. 2007); young birds disperse across the landscape distances of 0.1 mi to 35 mi from their natal burrows (Rosier et al. 2006). Burrowing owl populations have declined substantially in the San Francisco Bay Area in recent years, with declines estimated at four to six percent annually (DeSante et al. in press, in Rosenberg et al. 2007).

Burrowing owls occur year-round in the Santa Clara Valley (Trulio 2007), and are commonly present in open, agricultural, or grassland areas with active burrows of California ground squirrels. They exhibit strong site fidelity, and may return to a nesting site and attempt to nest even after the site has been developed. However, burrowing owls are increasingly disappearing from "infill" locations on the urban Valley floor. There are no known records of burrowing owls within the Plan area, although burrowing owls are known to occur in several locations in the vicinity. Owls were present adjacent to the Eastside Retention Basin and on the west side of the golf course in 2006 (Wilkerson and Siegel 2010). During surveys in October 2010 and November 2015, H. T. Harvey & Associates biologists detected burrowing owls occupying burrows on the former landfill just north of the golf course, approximately 0.4 mi north of the Plan area (H. T. Harvey & Associates 2010c, 2015). However, both of these surveys included the length of the drainage swale and adjacent levees, and no burrowing owls were detected using these areas either during the October 2010 and November 2015 focused burrowing owl surveys or during a June 14-15 reconnaissance-level survey along the drainage swale in 2010. Burrowing owl surveys were performed throughout the grassland habitat at the Santa Clara Golf and Tennis Club in 2014 and 2015 (ICF International 2015). No burrowing owls were detected during these surveys, but potential owl pellets were detected east of the BMX track. A pair of nesting burrowing owls was present on City property south of Levi's Stadium, approximately 0.5 mi southwest of the Plan area in 2012 and 2014 (H. T. Harvey & Associates 2012a and 2014), and one owl continued to be present at this location in July 2015 (R. Carle, pers. obs.).

Suitable nesting and roosting habitat for burrowing owls is limited on the site due to the paucity of burrows of California ground squirrels. Although several ground squirrel burrows are present on the Guadalupe River levee within the Plan area, the high levels of disturbance from pedestrians, bicyclists, and dogs on the immediately adjacent Guadalupe River trail likely precludes the presence of nesting or roosting burrowing owls in this area. Albion Environmental (2008) assessed the potential impact of the SCVWD's proposed burrow management under the Stream Maintenance Program on burrowing owls. Because no evidence existed that SCVWD levees provided important burrowing owl nesting or roosting habitat (i.e., used regularly or by a sizeable proportion of the South San Francisco Bay population), Albion Environmental concluded that management of burrows on the SCVWD's levees would not result in a substantial impact on burrowing owl habitat. Thus, although

ostensibly suitable habitat for burrowing owls occurs along the Guadalupe River levee, burrowing owls are unlikely to be present and are not expected to nest in the Plan area or make regular use of this habitat.

Similar to the negative results of surveys in June and October 2010 and November 2015, no burrowing owls were detected within or immediately adjacent to the Plan area during our reconnaissance-level survey on December 13, 2016. Several California ground squirrel burrows were observed within the Plan area along the Guadalupe River levee to the east, and thus ostensibly suitable nesting, roosting, and foraging habitat for owls is present in ruderal grassland habitat in Plan area, although, due to the reasons outlined above, it is highly unlikely that owls would utilize this habitat. However, burrowing owls are known to occur at the All Purpose Landfill approximately 0.4 mi to the north and near Levi's Stadium approximately 0.5 mi to the southwest. Thus, there is some possibility, albeit very low, that an owl from one these locations may occasionally forage and roost in the Plan area.

San Francisco Common Yellowthroat (*Geothlypis trichas sinuosa*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The San Francisco common yellowthroat inhabits emergent vegetation and nests in fresh and brackish marshes and moist floodplain vegetation around the San Francisco Bay. Common yellowthroats will use small and isolated patches of habitat as long as groundwater is close enough to the surface to encourage the establishment of dense stands of rushes, cattails, willows, and other emergent vegetation (Nur et al. 1997, Gardali and Evens 2008). Ideal habitat, however, is composed of extensive, thick riparian, marsh, or herbaceous floodplain vegetation in perpetually moist areas, where populations of brown-headed cowbirds are low (Menges 1998). San Francisco common yellowthroats nest primarily in fresh and brackish marshes, although they nest in salt marsh habitats that support tall vegetation (Guzy and Ritchison 1999). This subspecies builds open-cup nests low in the vegetation, and nests from mid-March through late July (Guzy and Ritchison 1999, Gardali and Evens 2008).

The San Francisco common yellowthroat is one of approximately 12 subspecies of common yellowthroat recognized in North America, two of which occur in the South Bay region. Because subspecies cannot be reliably distinguished in the field, determination of the presence of San Francisco common yellowthroat can be achieved only by locating birds that are actively nesting within the breeding range known for the subspecies. Common yellowthroats nesting in the study area are of the special-status sinuosa subspecies (San Francisco Bay Bird Observatory 2012).

Within the Plan area region, the greatest proportion of nesting records of San Francisco common yellowthroat occur within brackish and freshwater marshes near the edge of the Bay, and in early-successional riparian habitat in broader floodplains (Bousman 2007c). Nests are typically located in extensive stands of bulrushes in brackish marshes and dense cattail beds in freshwater marshes, but the species also nests in forbs in riparian habitats.

The wetland habitat in the Plan area provides potential nesting and foraging habitat for San Francisco common yellowthroats. No common yellowthroats were observed in the drainage swale during the reconnaissance-level survey on December 13, 2016 or during previous reconnaissance-level surveys of this area on June14–15, 2010

(H. T. Harvey & Associates 2010a), whereas individuals of this species were observed in the wetland vegetation along the Guadalupe River during both of these site visits. These observations suggest that only small numbers of common yellowthroats use the drainage swale for nesting and foraging compared to the numbers of common yellowthroats that use the wetland habitat along the Guadalupe River. Nevertheless, one or two pairs of common yellowthroats could potentially nest in the freshwater wetland habitat in the Plan area during the nesting season, and this species likely forages in this habitat year-round. In addition, the freshwater wetland habitat in the drainage swale may provide refugia and cover for common yellowthroats and other bird species during winter storms when the water level in the Guadalupe River exceeds the height of the wetland vegetation.

5.3 Sensitive Natural Communities, Vegetation Alliances, and Habitats in the Plan Area

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. The CDFW determines the level of rarity and imperilment of vegetation types, and tracks sensitive communities in the CNDDB. Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings are a reflection of the condition of a habitat within California. Natural communities are defined using NatureServe's standard heritage program methodology as follows (California Department of Fish and Game [CDFG 2007]):

G1/S1: Less than 6 viable occurrences or less than 2000 ac.

G2/S2: Between 6 and 20 occurrences or 2000 to 10,000 ac.

G3/S3: Between 21 and 100 occurrences or 10,000 to 50,000 ac.

G4/S4: The community is apparently secure, but factors and threats exist to cause some concern.

G5/S4: The community is demonstrably secure to ineradicable due to being common throughout the world (for global rank) or the state of California (for state rank).

State rankings are further described by the following threat code extensions:

S1.1: Very threatened

S1.2: Threatened

S1.3: No current threats known

In addition to tracking sensitive natural communities, the CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009). These alliances are also ranked according to NatureServe's standard methodology (CDFG 2007). If an alliance is marked G1–G3, all of the vegetation associations within it will

also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program's currently accepted list of vegetation alliances and associations (CDFW 2010).

Impacts to CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, must be considered and evaluated under CEQA (Title 14, Division 6, Chapter 3, Appendix G of the California Code of Regulations). Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS.

5.3.1 Sensitive Natural Communities

A query of sensitive habitats in the CNDDB (2016) identified two sensitive natural communities as occurring within the nine 7.5-minute USGS quadrangles containing or surrounding the Plan area: (1) sycamore alluvial woodland (Rank G1/S1.1) and (2) northern coastal salt marsh (Rank G3/S3.2). Sycamore alluvial woodland is dominated by western sycamore (*Platanus racemosa*) which does not occur on the Plan area. Northern coastal salt marsh is characterized by Holland (1986) as occurring along sheltered inland margins of bays, often co-dominated by pickleweed (*Salicornia* spp.), cordgrass, and sometimes saltgrass (*Distichlis spicata*). None of these species were noted within the Plan area itself, and further, the wetlands in the Eastside Drainage Swale are fed by stormwater runoff and thus have a freshwater source.

5.3.2 Sensitive Vegetation Alliances

The perennial freshwater wetlands in the Plan area are dominated by California bulrush and cattail. The "*Schoenoplectus californicus – Typha latifolia*" alliance most closely fits the wetland plant community in the Plan area. This alliance is ranked as G5/S4 and is not considered sensitive (CDFW 2010).

5.3.3 CDFW Riparian Habitat

Due to its rarity and disproportionately high habitat values and functions to wildlife, CDFW considers riparian habitat to be sensitive. As described above in Section 3.2.4, the CDFW would likely claim jurisdiction over areas at and below the top of bank lines along the eastside drainage swale regardless of the vegetative composition of these areas. In addition, CDFW jurisdiction would extend to the outer edges of riparian tree canopies (see the mixed riparian woodland habitat type on Figure 3).

5.3.4 Sensitive Habitats (Waters of the U.S./State)

As described above under Section 3.1.1, the Eastside Drainage Swale and the perennial freshwater wetlands it supports may be considered waters of the U.S./state up to the ordinary high water lines. Waters of the state in the Plan area would likely extend up to the top of bank lines of the Eastside Drainage Swale and/or the landward edges of riparian tree canopies along the swale, whichever demarcation is of greater lateral extent.

Section 6. Impacts and Mitigation Measures

CEQA and the State CEQA Guidelines provide guidance in evaluating impacts of projects on biological resources and determining which impacts will be significant. The Act defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under State CEQA Guidelines section 15065, a project's effects on biotic resources are deemed significant where the project would:

A. "substantially reduce the habitat of a fish or wildlife species"

B. "cause a fish or wildlife population to drop below self-sustaining levels"

C. "threaten to eliminate a plant or animal community"

D. "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G (Chapter IV) may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

A. "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

B. "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

C. "have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act"

D. "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"

E. "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance"

F. "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan"

Potential impacts on existing biological resources were evaluated by comparing the quantity and quality of habitats present in the Plan area under baseline conditions to the anticipated conditions after implementation

of the proposed Plan. Direct and indirect impacts on special-status species and sensitive natural communities were assessed based on the potential for the species, their habitat, or the natural community in question to be disturbed or enhanced by development projects under the proposed Plan.

As described in Section 1.2, the proposed Tasman East Focus Area Plan creates a programmatic framework for the development of a high-density, transit-oriented neighborhood with supportive retail services. Because the precise design and layout of the Plan have not yet been prepared, it is unclear which portions of the Plan area will be impacted by future development and what development activities will be proposed in any given area. Therefore, our impact assessment is programmatic, and assumes that impacts could potentially be proposed anywhere in the Plan area.

6.1 Impacts Found to be Less than Significant

6.1.1 Impacts due to a Conflict with an Adopted Habitat Conservation Plan

The Plan will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Plan area is not located within the boundaries of the Santa Clara Valley Habitat Plan (VHP). Although the Plan area is located within the VHP's expanded study area for burrowing owl conservation, the Plan area provides very limited habitat for burrowing owls, and for reasons discussed previously, there is a low probability that burrowing owls occur in the Plan area or that the Plan area could be improved for use by burrowing owls (potential impacts on burrowing owls and their habitat are addressed separately below). Therefore, the Plan's implementation will not conflict with the VHP or any other conservation plan.

6.1.2 Impacts on Upland Habitats and Associated Common Plant and Wildlife Species

Construction activities related to the proposed Plan may permanently impact up to 43.02 ac of developed/landscaped habitat and 2.70 ac of ruderal grasslands (Figure 3). Permanent impacts would occur from the construction of parking spaces, dwelling units, retail space, and a grocery store. In addition, the Plan may alter the existing roadways, sidewalks, and landscaping. The proposed activities will alter and/or remove the existing vegetation of these areas. Both the developed/landscaped habitat and ruderal grassland are relatively abundant and widespread regionally, and are not particularly sensitive or valuable (from the perspective of providing important plant or wildlife habitat). Therefore, impacts on these habitats would not be considered significant under CEQA.

Impacts on these upland habitats would also result in impacts on the common (non-special-status) plant and animal species that occur there. These species would experience a direct loss of habitat due to implementation of the Plan, and the proposed activities could potentially result in the mortality, injury, disturbance, and displacement of individuals of some of these species. Additionally, loss of habitat and displacement of individuals could have indirect effects on populations and habitats outside of the Plan area by increasing

concentrations of individuals, leading to increases in intra- and interspecific competition and increased pressure on available resources.

The plant species observed in the Plan area during the reconnaissance-level survey (Appendix B) are not regulated under state or federal laws and are not listed as rare by the CNPS. All native plant species found on the site are regionally abundant and common in California.

As discussed previously, the Plan area currently supports a number of common wildlife species, although due to its largely developed nature, the Plan area provides relatively low-quality habitat for most species and thus supports relatively small numbers of individuals of any one species. The common wildlife species that occur in upland habitats in the Plan area are regionally abundant, are present in widely available habitats in the region, and will continue to be present in some portions of the Plan area following construction. Additionally, the proposed Plan would impact only a small proportion of their regional populations, and the number of individuals likely to be displaced by habitat disturbance and loss would be quite small with respect to the amount of suitable habitat available in the area. Thus, impacts on most common species and their habitats resulting from Plan implementation would not meet the threshold of having a *substantial* adverse effect, and would not be considered significant under CEQA. However, all native bird species are protected from direct take by federal and state statutes, and the City of Santa Clara considers impacts on common species of nesting birds to be significant under CEQA (see Section 6.2.10, *Impacts on Common Species of Nesting Birds*). The analysis of the potential for Plan implementation to impact special-status animals found in the upland habitats in the Plan area is discussed separately below.

6.1.3 Impacts on Nonbreeding Special-Status Birds and Mammals

Several special-status bird and mammal species occur in the Plan area as non-breeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers in the Plan area. These are the yellow warbler, Alameda song sparrow, tricolored blackbird, American peregrine falcon, white-tailed kite, and pallid bat.

The tricolored blackbird (a California species of special concern) is not expected to occur in the Plan area as a breeder due to the absence of suitable breeding habitat, high levels of adjacent human disturbance, and lack of existing breeding records, but individuals may occur occasionally as foragers during the nonbreeding season. The Alameda song sparrow (a California species of special concern) breeds in the marshes along Alviso Slough to the north, and individuals may forage in the wetland habitat in the Plan area during the nonbreeding season. The American peregrine falcon and white-tailed kite (state fully protected species) are not expected to breed in the Plan area due to a lack of suitable nesting habitat. Individuals of these species may occasionally occur on the site while foraging, but are not expected to occur regularly. The pallid bat (a California species of special concern) may be present in the Plan area as an occasional forager, but is not expected to breed in the Plan area due to a lack of suitable habitat, and there are no known maternity colonies on or adjacent to the site. Nevertheless, individuals from more remote colonies could potentially forage over the open grasslands on the site on rare occasions.

Activities under the proposed Plan would have some potential to impact foraging habitats and/or individuals of these species. Construction activities might result in a temporary direct impact through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during maintenance activities) but would not result in the loss of individuals. Further, the Plan area does not provide important foraging habitat used regularly or by large numbers of individuals of any of these species. As a result, impacts under the Plan will have little impact on these species' foraging habitat and no substantive impact on regional populations of these species. Therefore, this impact would be less than significant.

6.1.4 Impacts on the San Francisco Common Yellowthroat

Potential impacts on the San Francisco common yellowthroat could occur as a result of activities within or near the freshwater wetland habitat within the Eastside Drainage Swale. No impacts on this species are expected to occur as a result of activities located elsewhere within the Plan area.

Because San Francisco common yellowthroats may nest in vegetation along the Eastside Drainage Swale within the Plan area, eggs or young in nests may be killed or injured during construction activities as a result of destruction by construction personnel or equipment, or removal of vegetation containing nests. In addition, construction activities causing a substantial increase in noise, movement of equipment, or human presence near (i.e., within 100 ft of) active nests could result in the abandonment of nests, and possibly the loss of eggs or young as a result. Increased human activity may also affect the behavior of birds, causing them to avoid work sites and possibly exposing them to increased competition with other birds in the areas to which they disperse and to increased levels of predation caused by their unfamiliarity with the new area. Increases in human concentration and activity associated with construction in the vicinity of the Eastside Drainage Swale may also result in an increase in native and non-native predators that would be attracted to trash left in the work site, and in a reduction in the quality of breeding or foraging habitat caused by the introduction of non-native vegetation. Clearing and grading may result in the permanent loss of up to 0.39 ac of perennial freshwater wetland nesting and/or foraging habitat for this species. In addition, increased sedimentation or hazardous material spills from construction activities may result in the temporary or permanent degradation of water quality and, hence, habitat quality in wetland habitats downstream from work sites, which could negatively affect habitat quality for this species.

At most, one or two pairs of San Francisco common yellowthroats could potentially nest within the Plan area along the Eastside Drainage Swale, and two additional pairs of this species could potentially nest close enough to this area to potentially be indirectly affected by construction activities (i.e., within 100 ft). These birds are not particularly rare in the region, and suitable habitat for this species within the region is relatively abundant. Therefore, the permanent loss of up to 0.39 ac of nesting and foraging habitat for this species within the Plan area would not result in appreciable impacts on its regional population. Further, the potential disturbance of nesting and loss of eggs or young in nests of up to two pairs of this species as a result of construction activities under the Plan is not expected to result in a substantial impact on the regional population due to a loss of habitat or individuals. Therefore, impacts on this species under the Plan would be less than significant (but see Section 7.1).

6.1.5 Impacts on Wildlife Movement Corridors

For many species, the landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors are segments of land that provide a link between these different habitats while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife: first, as habitat patches become smaller they are unable to support as many individuals (patch size); and second, the area between habitat patches may be unsuitable for wildlife species to traverse (connectivity).

The wetland and upland habitats along the Eastside Drainage Swale serve as a movement pathway for terrestrial wildlife species, providing vegetative cover and foraging opportunities. Common, urban-adapted species such as raccoons, striped skunks, and the non-native Virginia opossum may use the vegetation along the swale to move north and south through the Plan area. Small mammals, such as mice and shrews, will also use this vegetation to move between habitats. The potential culverting and associated removal of up to 0.39 ac of this habitat will create a gap of open, developed habitat along this corridor, which any wildlife species traveling along this corridor must cross in order to traverse the Plan area. However, because the many terrestrial wildlife species that use this habitat are acclimated to high levels of disturbance and existing fragmented habitats in the vicinity, this is not expected to result in significant impacts on the movements of individuals, and would not rise to the level of a substantial adverse effect on habitat connectivity and wildlife movement under the CEQA.

To the east of the Plan area, the Guadalupe River and the associated wetland/riparian corridor provides an important movement pathway for both aquatic and terrestrial wildlife species, connecting the associated wetlands to the San Francisco Bay. The Plan would not result in any loss of aquatic or wetland habitat along the Guadalupe River or in any substantial reduction in the value of the Guadalupe River corridor for wildlife movement. Thus, aquatic and terrestrial species would continue to be able to move north to south along the Guadalupe River following development of the remaining ruderal grassland and wetland habitats in the Plan Area. Therefore, the Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and this impact is determined to be less than significant.

6.2 Impacts Found to be Less than Significant with Mitigation

6.2.1 Impacts due to the Spread of Invasive Weeds

Several non-native invasive plant species occur in the Plan area. Of these, wild oats and black mustard are the most abundant, and are rated as moderately invasive, thus they can cause substantial ecological impacts on physical processes, plant and animal communities, and vegetation structure (Cal-IPC 2016). English ivy and fennel occur sparsely in the Plan area, but are considered to be highly invasive and thus may also potentially cause significant ecological impacts (Cal-IPC 2016). Invasive weeds can occur in all habitat types in the Plan area and can be difficult to eradicate. One of the characteristics of some invasive plant species that make them successful is that they produce seeds that germinate readily following disturbance. In addition, newly disturbed

areas are highly susceptible to colonization by non-native, invasive species that occur locally, or whose propagules are brought in by personnel, vehicles, and other equipment. While the proposed Plan is unlikely to introduce new weeds to the Plan area, ground-disturbing activities within existing weed stands can result in the unintentional introduction of these species into adjacent sensitive habitats such as the wetlands within the Eastside Drainage Swale or Guadalupe River. The further expansion of weeds into sensitive habitats downstream can have detrimental effects on their vegetative composition and wildlife habitat value. Introduction or spread of invasive weeds into sensitive wetland or riparian habitats would be a significant impact. Implementation of Mitigation Measure 1 will reduce this impact to a less-than-significant level.

Mitigation Measure 1. Implement Invasive Weed BMPs. Avoiding the spread of noxious weeds will be avoided by the use of the following invasive weed BMPs:

- During construction under the proposed Plan, all seeds and straw materials used on-site will be weed-free rice (or similar material acceptable to the City) straw, and all gravel and fill material will be certified weed free to the satisfaction of the City and any deviation from this will be approved by the City.
- During construction of projects under the proposed Plan, vehicles and all equipment will be washed (including wheels, undercarriages, and bumpers) before and after entering the proposed project footprint. Vehicles will be cleaned at existing construction yards or legally operating car washes.
- Following construction of projects under the proposed Plan, a standard erosion control seed mix (acceptable to the City) from a local source will be planted within the temporary impact zones on any disturbed ground that will not be under hardscape, landscaped, or maintained. This will minimize the potential for the germination of the majority of seeds from non-native, invasive plant species.

6.2.2 Impacts on Wetlands and Water Quality in the Eastside Drainage Swale

Implementation of the Plan may result in the permanent loss of up to 0.39 ac and 810 linear feet of perennial freshwater wetlands within the active channel of the Eastside Drainage Swale if these wetlands are filled or culverted. These wetlands may be subject to regulatory jurisdiction of the USACE, RWQCB, and/or CDFW. Regardless of whether these wetlands are determined to be jurisdictional, they serve a variety of important functions, such as sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, and aquatic and terrestrial wildlife species habitat. The wetland habitat within the Eastside Drainage Swale has some ecological value within the urban matrix of the Plan area and its vicinity. Even though the acreage of impacts to wetlands (0.39 ac) is relatively small, wetlands are relatively scarce regionally, and even small wetland areas have disproportionate contributions to water quality, groundwater recharge, watershed function, and wildlife habitat in the region. This habitat also provides valuable refuge and foraging resources for wildlife species that typically occur in the more extensive wetland habitat in the adjacent Guadalupe River during winter flooding events, when wetland habitat in the river is inundated. For all these reasons, permanent impacts on vegetated wetlands in the Plan area would be considered significant under CEQA. The implementation of Mitigation Measure 2 would reduce this impact to a less-than-significant level.

In addition, the project proponent for any activity that results in fill of the Eastside Drainage Swale will obtain any necessary resource agency permits and will comply with the conditions of those permits.

Water quality in the Eastside Drainage Swale could be impacted by construction activities within the Plan area. Bank erosion and sedimentation are potential effects of disturbance associated with construction within the swale. Construction activities located outside of the swale may also result in indirect impacts on the plant and animal species that occur in aquatic habitats (perennial freshwater wetlands) in the Eastside Drainage Swale through erosion and sedimentation. In the absence of protective measures, these impacts would be significant due to the ecological importance and sensitivity of stream habitats and species that inhabit the Eastside Drainage Swale. The implementation of Mitigation Measure 3 to protect water quality would reduce these impacts to a less-than-significant level.

Mitigation Measure 2. Provide Compensatory Mitigation for Wetland Impacts. To compensate for the permanent loss of wetlands, perennial marsh habitat will be restored or created at a minimum ratio of 2:1 (compensation : impact) on an acreage basis. This ratio is not higher due to the relatively low quality of the wetlands in the Plan area relative to more extensive, less fragmented wetlands elsewhere along the Guadalupe River, but is not lower due to the temporal loss of wetland functions and values that will result from the lag between impacts to the wetlands in the Plan area and maturation of the mitigation habitat.

Compensation will be provided by creating or restoring wetland habitat so as to achieve the 2:1 ratio somewhere in the Santa Clara Valley. Among other criteria, the mitigation site(s) must not currently be wetlands. A qualified biologist shall develop a "Wetland Mitigation and Monitoring Plan" describing the mitigation, which will contain the following components (or as otherwise modified by regulatory agency permitting conditions):

- Summary of habitat impacts and proposed mitigation ratios
- Goal of the restoration to achieve no net loss of habitat functions and values
- Location of mitigation site(s) and description of existing site conditions
- Mitigation design:
    - Existing and proposed site hydrology
    - Grading plan if appropriate, including bank stabilization or other site stabilization features
    - Soil amendments and other site preparation elements as appropriate
    - Planting plan
    - Irrigation and maintenance plan
    - Remedial measures and adaptive management
- Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, and monitoring schedule). Success criteria will include quantifiable measurements of wetland vegetation type (e.g., dominance by natives) and extent appropriate for the restoration location,

and provision of ecological functions and values equal to or exceeding those in the wetland habitat affected. At a minimum, success criteria will include following:

- At Year 5 post-mitigation, at least 75 percent of the mitigation site will be dominated by native hydrophytic vegetation.

The Wetland Mitigation and Monitoring Plan must be approved by the City of Santa Clara prior to the wetland impacts, and it must be implemented within one year following impacts. As discussed in Sections 3.1.1 and 3.2.1 above, in the event that the drainage swale is determined to be jurisdictional, any impacts within this habitat would be subject to a Section 404 permit issued by the USACE and/or Section 401 Water Quality Certification issued by the SRWQCB.

Alternatively, mitigation may be provided by restoring or creating at a minimum ratio of 2:1 (compensation : impact) on an acreage basis by either: (a) purchasing credits at a suitably located mitigation bank in the Santa Clara Valley approved by the City of Santa Clara, or (b) donating funds to a project undertaking enhancement or restoration of wetland or riparian habitats in the Santa Clara Valley, approved by the City of Santa Clara.

Mitigation Measure 3. Minimize Potential Plan Impacts on Water Quality during Construction. In compliance with the NPDES, the Plan will comply with the SWRCB General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, which requires preparation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that will include specific and detailed Best Management Practices (BMPs) designed to mitigate construction-related pollutants. These controls will include methods to minimize indirect impacts as a result of construction activities that may compromise water quality in the Eastside Drainage Swale. Additional control measures identified in this SWPPP will mitigate the release of construction-related pollutants from the main site during the various construction phases. Unless otherwise authorized by the RWQCB and in compliance with the NPDES permit issued for the proposed activities, the following measures will be implemented during project implementation to avoid or minimize impacts on water quality:

- All permit conditions, legal requirements, and appropriate dredging and engineering practices shall be followed to avoid and minimize water quality impacts associated with project activities. Suitable erosion control, sediment control, source control, treatment control, material management, and stormwater management BMPs will be implemented consistent with the latest edition of the California Stormwater Quality Association "Stormwater Best Management Practices Handbook," available at www.capmphandbooks.com.
- Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations). Feasible measures shall be implemented to ensure that hazardous materials are

properly handled and the quality of wetland and aquatic resources is protected by all reasonable means when removing vegetation and sediments from the channels.

- No fueling shall be done in areas along the Eastside Drainage Swale. For stationary equipment that must be fueled within 50 ft of the swale, containment shall be provided in such a manner that any accidental spill of fuel shall not be able to enter the water or contaminate sediments that may come in contact with water.
- A hazardous materials management/fuel spill containment plan will be developed and implemented by the construction contractor, and given to all contractors and biological monitors. One copy of the hazardous materials management/fuel spill containment plan located will be on the work site at all times, and will provide construction managers, environmental compliance monitors, and regulatory agencies with a detailed description of hazardous materials management, spill prevention, and spill response/cleanup measures associated with the construction of the Plan elements. Elements of the materials management/fuel spill containment plan will include, but are not limited to the following:
    - A discussion of hazardous materials management, including delineation of hazardous material and hazardous waste storage area, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
    - Materials Safety Data Sheets for all chemicals used and stored on site;
    - An inventory list of emergency equipment;
    - Spill control and countermeasures including employee spill prevention/response training;
    - Notification and documentation procedures; and
    - A monthly reporting plan.
- Vehicles will be checked daily for oil or fuel leaks and will be washed only at an approved area. No washing of vehicles will occur outside of designated staging areas in uplands.
- The work site, areas adjacent to the site, and access areas will be maintained in an orderly condition, free and clear from debris and discarded materials. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust onto adjacent areas or wetlands or waterways. Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the Plan area.
- Stockpiled materials will be covered by plastic sheeting, tarps, or similar material that can be secured during wind and rain. A sediment fence or berm will be installed around stockpiled material to prevent runoff from transporting sediment into the Eastside Drainage Swale.
- Silt fencing will be erected along the limits of disturbance between the Plan area and the Eastside Drainage Swale.

- For construction activities occurring within 50 feet of aquatic habitat in the drainage swale, protective measures shall be put in place to ensure that impacts on the swale are avoided and minimized. The following measures shall be implemented during construction:
    - Orange construction barrier fencing shall be installed around the boundaries of portions of the drainage swale that are to be avoided prior to the initiation of construction activities.
    - The fenced area will be designated as an Environmentally Sensitive Area and will be clearly identified in the construction specifications.
    - The fencing shall be maintained throughout the grading and construction period.
    - Grading, construction activities, traffic, equipment, or materials shall be prohibited in fenced wetland areas.

6.2.3 Impacts on Mixed Riparian Woodland

The Plan has the potential to impact 0.05 ac of mixed riparian woodland associated with the eastern drainage swale (Figure 3). This woodland may be destroyed due to tree removal and replacement with developed structures, and grading or paving over the root zone of riparian trees will impair the health of riparian trees, possibly to the point of causing tree death. Although this riparian vegetation is not particularly high-quality habitat due to its narrow, sparse nature, it is dominated by native riparian species such as blue elderberry and Fremont cottonwood, and due to its proximity to the drainage swale, the Guadalupe River, and the Ulistac Natural Area, this riparian vegetation provides important resources that are used by migratory birds and other wildlife. Owing to the functions and values of this riparian habitat, the importance of woody riparian habitat to birds in the South Bay, and the regional scarcity of riparian habitat due to historical losses of these woodlands, the impact to 0.05 ac of mixed riparian woodland would be considered significant. Implementation of Mitigation Measure 4 would reduce this impact to a less-than-significant level.

The banks of the eastside drainage swale may also be regulated as "riparian" habitat (e.g., by the CDFW and/or RWQCB). However, much of the vegetation covering the banks is, in fact, typical of ruderal grasslands, and impacts to such non-woody vegetation would not be considered significant under CEQA.

Mitigation Measure 4. Provide Compensatory Mitigation for Impacts on Mixed Riparian Woodland. To compensate for the permanent loss of mixed riparian woodland, riparian woodland habitat will be restored or created at a minimum ratio of 2:1 (compensation : impact) on an acreage basis, based on canopy area. This ratio is not higher due to the relatively low quality of the riparian woodland in the Plan area relative to more extensive, less fragmented riparian woodland elsewhere along the Guadalupe River, but is not lower due to the temporal loss of riparian functions and values that will result from the lag between impacts to the woodland in the Plan area and maturation of the mitigation habitat.

Compensation will be provided by planting riparian habitat so as to achieve the 2:1 ratio somewhere in the Santa Clara Valley, preferably along the Guadalupe River but along another stream if appropriate. Among other

criteria, the mitigation site(s) must not currently be riparian. Mitigation habitat may be hydrologically isolated from the stream in question as long as it is located within 300 feet of the stream, is not separated from the stream by development other than a trail or levee, and is dominated by native riparian trees. Although some portions of the Ulistac Natural Area are more than 300 feet from the Guadalupe River, mitigation anywhere within the Natural Area would satisfy this measure. A qualified biologist shall develop a "Riparian Habitat Mitigation and Monitoring Plan" describing the mitigation, which will contain the following components (or as otherwise modified by regulatory agency permitting conditions):

- Summary of habitat impacts and proposed mitigation ratios
- Goal of the restoration to achieve no net loss of habitat functions and values
- Location of mitigation site(s) and description of existing site conditions
- Mitigation design:
    - Existing and proposed site hydrology
    - Grading plan if appropriate, including bank stabilization or other site stabilization features
    - Soil amendments and other site preparation elements as appropriate
    - Planting plan
    - Irrigation and maintenance plan
    - Remedial measures and adaptive management
- Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, and monitoring schedule). Success criteria will include quantifiable measurements of riparian vegetation type (e.g., dominance by natives) and extent appropriate for the riparian restoration location, and provision of ecological functions and values equal to or exceeding those in the riparian habitat affected. At a minimum, success criteria will include following:
    - At Year 10 post-planting, canopy closure at the mitigation site will be at least 60 percent of the canopy closure at a nearby reference site (i.e., a site supporting the same habitat type as that being established at the mitigation site).

The Riparian Habitat Mitigation and Monitoring Plan must be approved by the City of Santa Clara prior to the impact on mixed riparian woodland, and it must be implemented within one year following impacts.

Alternatively, mitigation may be provided by restoring or creating at a minimum ratio of 2:1 (compensation : impact) on an acreage basis by either: (a) purchasing credits at a suitably located mitigation bank in the Santa Clara Valley approved by the City of Santa Clara; or (b) donating funds to a project undertaking enhancement or restoration of wetland or riparian habitats in the Santa Clara Valley, approved by the City of Santa Clara.

6.2.4 Encroachment into the Stream/Riparian Buffer

To protect the ecological functions and values of a stream, buffers are often prescribed between new development and the stream (or its banks, or associated riparian habitat). These buffers provide habitat for plants and animals associated with the stream, provide habitat connectivity (i.e., areas used for wildlife movement), reduce indirect effects of adjacent development (e.g., noise, lighting, human activity, or invasive species) on the natural stream and riparian habitats, allow for the possible future expansion of natural habitat, help to maintain site hydrology, and in some areas allow for runoff to be treated (e.g., by flowing over vegetated areas) before it enters the stream. In addition, along creeks such as the Guadalupe River, habitat within stream buffers may provide important refugia for animals associated with wetland and riparian habitats along the river during flood events, when little to no such refugia may be present within the banks of the river itself.

In general, larger buffers protect more of the ecological functions and values of the stream than smaller buffers. Encroachment into the riparian buffer, such as development within the buffer, or landscaping or planting with non-native vegetation within the buffer, would represent a significant impact because of the currently high ecological value of the Guadalupe River and the degradation to that value that would occur due to encroachment.

The City of Santa Clara does not have an established policy regarding the widths of buffers that should be maintained between development and streams. However, a number of other jurisdictions and entities have evaluated suitable buffers, and the results of those evaluations are applicable to the Tasman East Focus Area Plan. For example, the City of San Jose's Riparian Corridor Policy Study recommends setbacks of 100 ft from the portion of the Guadalupe River within the City of San Jose. Similarly, the VHP included an analysis of relevant literature and studies informing the application of appropriate setbacks based on stream hydrology and function, adequate to provide protection of habitat functions and values (ICF International 2012) and determined that 100-ft setbacks are appropriate from perennial streams such as the Guadalupe River in the northern portion of the VHP area. Although the Tasman East Focus Area Plan area is not subject to either the City of San Jose or VHP guidance, we agree that a 100-ft setback is generally appropriate between development and the Guadalupe River in the vicinity of the Plan area to maintain suitable riparian functions and values (this setback is depicted on Figure 3). This setback would be measured from a "buffer baseline" along the top of bank of the levee between the Plan area and the river. We recognize that the existing levee between the Plan area and the Guadalupe River will continue to provide some visual and auditory buffer, but a 100-ft setback is still appropriate.

However, under CEQA it is appropriate to analyze the effects of future development in the Plan area relative to the existing conditions, and currently, limited development (parking areas and the corner of a building) is present approximately 95 ft from the top of bank of the Guadalupe River levee. Therefore, impacts of encroachment into the riparian buffer would be significant for the Tasman East Focus Area Plan only if development (e.g., new buildings, parking areas, or other hardscape) or non-native landscaping were to be located within 100 ft of the baseline, or in areas where such development is already present, any closer to the baseline than existing conditions (i.e., the buffer ranges from approximately 95 ft to 100 ft).

Development features compatible with open space and/or maintenance of water quality functions within the Guadalupe River and nearby sensitive habitats such as vegetated retention basins and biotreatment swales that occur within the 100 ft setback are considered a beneficial use and would not be considered a significant impact. In addition, no riparian setback from the narrow drainage swale in the eastern part of the Plan area is necessary.

Implementation of Mitigation Measures 5 and 6 would reduce riparian buffer encroachment impacts to less-than-significant levels.

Mitigation Measure 5. Observe Minimum Buffers. If encroachment into the riparian buffer with incompatible uses (defined as hardscape or other impermeable surfaces, nonnative landscape plantings, and paved permeable surfaces such as permeable pavers) is proposed, no buildings shall be constructed closer to the buffer baseline than are currently present (i.e., in one location, a corner of a building is within approximately 95 ft of the buffer baseline, and that limited area can include a building) unless mitigation is provided in accordance with Mitigation Measure 6 below. In addition, no new buildings or structures, impervious surface, or non-native landscaping shall occur closer to the buffer baseline than is currently present (i.e., 75 ft). Compatible uses within these areas are public trails, native landscaping, and unpaved permeable surfaces (e.g., open ground).

Mitigation Measure 6. Provide Compensatory Mitigation for Riparian Buffer Encroachment. If any encroachment into the riparian buffer is proposed, compensatory mitigation shall be provided to offset the impacts on the ecological functions and values of the riparian corridor. Such compensatory mitigation will be provided in one of two ways:

(1) At a minimum ratio of 1:1 (compensation : impact), on an acreage basis[3], existing development (e.g., buildings or hardscape) along the Guadalupe River, either on-site or off-site (e.g., at Ulistac Natural Area), will be removed, and the developed area restored to native habitats and dedicated to natural habitat (rather than active human uses such as urban park). For example, if a portion of the Plan area were subject to riparian buffer encroachment, but a commensurate acreage of existing developed areas adjoining the Guadalupe River levee in other parts of the Plan area were restored to native habitat, that would compensate for the riparian buffer encroachment impact.

(2) At a minimum ratio of 2:1 (compensation : impact) on an acreage basis, riparian woodland habitat will be restored or created as described in Mitigation Measure 4 above to provide ecological functions and values that offset those lost due to riparian buffer encroachment.

[3] Impacts on wetlands and mixed riparian woodland will occur within the riparian buffer, and would be mitigated at a 2:1 ratio as described under Mitigation Measures 2 and 4 above. Impacts within these areas would not also need to be mitigated as part of compensatory mitigation within the riparian buffer.

6.2.5 Impacts on Protected Trees

The City of Santa Clara provides tree protection under the Municipal Code (Chapter 12.35), and under the General Plan (Conservation Policy 5.10.1-P3 and Appendix 8.10). These policies detail protections for street trees and preservation of all City-designated heritage trees. The General Plan also requires new development to provide street trees as well as a minimum 2:1 on or off-site replacement for trees removed.

The implementation of projects under the proposed Plan would potentially remove numerous trees that occur throughout the property. Existing trees on site are a mixture of mainly non-native or not naturally-occurring, planted, ornamental species and include eucalyptus, acacias, and London planes. Some of these trees are adjacent to City streets and thus may be considered street trees. A permit is required for any street tree removal, regardless of size or species. The removal of trees would not have a significant impact on wildlife, because the trees are mostly landscaped and non-native species that are not regionally limited. However, because tree removal conflicts with the City of Santa Clara Municipal Code and Santa Clara General Plan, it would be considered a significant impact under CEQA. In addition, trees that are not removed by development, but that are retained in or near development areas, may be subject to injury or mortality due to root damage that occurs during grading, paving, or other ground disturbance; changes in hydrology that result in soil loss due to erosion, excessive watering, or inappropriately dry conditions; excessive pruning; or damage to trunks from equipment. With the implementation of Mitigation Measures 7 and 8, the significance of the impact would be reduced to a less-than-significant level. Impacts on riparian trees are discussed separately in Section 6.2.3 above.

Mitigation Measure 7. Obtain Tree Removal Permit and Provide Tree Replacement. Project proponents under the Plan will comply with the City Code, and submit permit applications for removal of all trees covered by the ordinance. Any street trees or heritage trees to be removed may require replacement according to the discretion of the City Director of Planning, and the City may require on-site or off-site replacement of trees at a minimum 2:1 ratio per General Plan Policy 5.3.1-P10 (see Section 3.3.2 above). The replacement trees will be planted on-site and the project proponent will comply with all other tree removal requirements imposed by the City.

Mitigation Measure 8. Prepare Tree Protection Plan. Projects will implement precautionary measures during site construction to limit adverse effects on ordinance-protected trees that are to be retained. A tree protection plan shall be prepared by a qualified arborist to describe measures that will be implemented to avoid and minimize impacts on trees that are not removed. At a minimum, the tree protection plan will require installation of an open material (e.g., chain link) fence 6 ft in height around the drip line of each ordinance-protected tree and maintenance of the existing grade level around a tree and out to its drip line.

6.2.6 Impacts on the Western Pond Turtle

Western pond turtles may occur in aquatic habitat along the Guadalupe River. Individual pond turtles may occasionally disperse across upland and wetland portions of the Plan area, and there is some potential that they could occasionally use uplands for nesting. However, pond turtles are unlikely to excavate nests in the Plan area

due to the dense, compacted nature of the soils on the Guadalupe River levee and the gravel present within much of the ruderal grassland habitat.

Development under the Plan would result in the permanent loss of upland habitat for western pond turtles, although except in the rare event that turtles were to attempt nesting on the site, this habitat is of limited value to the species. Nevertheless, Plan development could potentially result in the injury or mortality of individuals due to worker foot traffic, equipment use, or vehicle traffic. Movements of pond turtles may be temporarily affected during construction activities because of disturbance, and dewatering activities (e.g., in the Eastside Drainage Swale) may expose individuals to a greater risk of predation and interfere with predator detection, causing a decrease in time spent foraging. Petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals. Additionally, increases in human presence and activity in the vicinity of suitable habitat during construction may result in an increase in native and non-native predators that would be attracted to trash left at the work site. For example, raccoons, American crows (*Corvus brachyrhynchos*), and common ravens (*Corvus corax*) are attracted to trash and may prey opportunistically on western pond turtles.

Development under the Plan could result in the permanent loss of potential western pond turtle dispersal habitat along the Eastside Drainage Swale (i.e., perennial freshwater wetland habitat). Water quality within the swale could also be affected by construction activities, as described above.

The Plan area does not provide important or extensive habitat that is used regularly or by large numbers of western pond turtles, and is not heavily relied upon by breeding individuals of this species. Thus, impacts on habitats for western pond turtles resulting from the proposed Plan would likely be very limited. However, due to the regional rarity of this species, Plan impacts on individual western pond turtles would be considered significant under CEQA. The implementation of Mitigation Measure 9 will minimize potential impacts on western pond turtles to less-than-significant levels.

Mitigation Measure 9. Conduct Preconstruction Surveys. Prior to any construction activity in natural habitat/substrate on the extreme eastern portion of the site (i.e., ruderal grassland, perennial freshwater wetland, or riparian habitat), a qualified biologist will examine the impact area for pond turtles and their nests 48 hours before proposed construction activities begin. If a western pond turtle is observed within the work area at any time before or during proposed construction activities, all activities will cease until such time that either (1) the pond turtle leaves the area or (2) the qualified biologist can capture and relocate the animal to suitable habitat away from construction activity.

6.2.7 Impacts on the Burrowing Owl

Suitable habitat for burrowing owls (i.e., ruderal areas with burrows of California ground squirrels) is present in the ruderal grassland habitat in the Plan area. However, as discussed above, burrowing owls are not expected to nest in the Plan area and are unlikely to roost or forage there due to high levels of disturbance and because this habitat has never been known to be occupied despite a number of surveys of the region between 2006 and

2016. Nevertheless, there is some possibility, albeit very low, that an owl from a nearby location where owls are known to occur may occasionally forage and roost in the Plan area.

Impacts from the proposed Plan may affect burrowing owl habitat (foraging and roosting) and/or individuals. Because they roost underground, individual burrowing owls (especially adults in burrows) may be killed or injured during development activities from trampling by construction personnel or equipment. Construction activities that occur in close proximity to active burrows may disturb owls to the point of abandoning their burrows. In addition, clearing and grading could result in the direct loss of habitat or individuals through the disturbance of grassland areas that support ground squirrel burrows.

Burrowing owls seem to occur more widely in the South San Francisco Bay in winter than they do during the nesting season. For example, burrowing owls occur on Coyote Ridge and in Coyote Valley during winter, but they have not been recorded lingering into spring and summer to nest in those areas in recent years. This suggests that wintering habitat for burrowing owls is not limiting the species' South San Francisco Bay populations. As a result, impacts of proposed Plan activities on wintering owl habitat, including burrows that were occupied by owls only during the winter but that were not used for nesting, are not expected to affect appreciably regional populations of this species. However, as the availability of grassland habitat used for nesting in the Plan area region continues to dwindle because of development, the South San Francisco Bay nesting population of burrowing owls faces extirpation caused by lack of sufficient suitable nesting and nesting-season foraging habitat and isolation from other populations and habitat areas. Therefore, impacts on individual burrowing owls (at any time of year) and occupied nesting habitats would contribute to the broader-scale decline in regional burrowing owl populations.

Albion Environmental (2008) assessed the potential impact of the SCVWD's proposed burrow management under the Stream Maintenance Program on burrowing owls. Because no evidence existed that District levees provided important burrowing owl nesting or roosting habitat (i.e., used regularly or by a sizeable proportion of the South San Francisco Bay population), Albion Environmental concluded that management of burrows on the SCVWD's levees would not result in a substantial impact on burrowing owl habitat. Thus, although ostensibly suitable habitat for burrowing owls occurs along the Guadalupe River levee in the Plan area, development of this habitat under the Plan is expected to have a less than significant impact on burrowing owls and their habitat because this habitat is either unoccupied or is used infrequently by nonbreeding burrowing owls.

Nevertheless, potentially suitable roosting and foraging habitat is present in ruderal grassland habitat in the northwest corner of the Plan area and within 250 ft (the typical buffer distance recommend around active burrowing owl burrows by the CDFW). Thus, burrowing owls could be present on the site and within 250 ft of the site when construction activities occur, and the potential for construction activities to result in the loss or disturbance of an active owl burrow cannot be ruled out. Heavy ground disturbance, noise, and vibrations caused by proposed construction could potentially disturb foraging or roosting burrowing owls and cause them to move away from work areas. Due to the rarity of the burrowing owl in the region and the effects on

burrowing owl populations of the loss of any individuals, the loss of individual burrowing owls or active burrowing owl burrows would be significant under CEQA. Implementation of Mitigation Measures 10-13 would reduce potential impacts on roosting burrowing owls during Plan-related construction to a less-than-significant level.

Mitigation Measure 10: Conduct Preconstruction Surveys for Burrowing Owls. Preconstruction surveys for burrowing owls will be conducted prior to the initiation of all construction activities within suitable burrowing owl roosting habitat (i.e., ruderal grassland habitat with burrows of California ground squirrels) in the Plan area, or within 250 ft of this habitat. Preconstruction surveys will be completed in conformance with the CDFW's 2012 guidelines (CDFG 2012). An initial habitat assessment will be conducted by a qualified biologist to determine if suitable burrowing owl habitat is present. During the initial site visit, which will be conducted not less than 14 days prior to the onset of ground disturbing activities, a qualified biologist will survey the entire activity area and (to the extent that access allows) the areas within 250 ft of the site for suitable burrows that could be used by burrowing owls for nesting or roosting. If no suitable burrowing owl habitat (i.e., ruderal grasslands with burrows of California ground squirrels) is present, no additional surveys will be required. If suitable burrows are determined to be present within 250 ft of work areas, a qualified biologist will conduct at least one additional survey to investigate each burrow within the survey area for signs of owl use and to determine whether owls are present in areas where they could be affected by proposed activities. The final survey will be conducted within the 24-hour period prior to the initiation of construction activities in any given area.

Mitigation Measure 11: Implement Buffer Zones for Burrowing Owls. If burrowing owls are present during the nonbreeding season (generally September 1 to January 31), a 160-ft buffer zone will be maintained around the occupied burrow(s), if feasible. If maintaining such a buffer is not feasible, then the buffer must be great enough to avoid injury or mortality of individual owls. During the breeding season (generally February 1 to August 31), a 250-ft buffer, within which no newly initiated construction-related activities will be permissible, will be maintained between construction activities and occupied burrows. Owls present between February 1 and August 31 will be assumed to be nesting, and the 250-ft protected area will remain in effect until August 31. If monitoring evidence indicates that the owls are no longer nesting or the young owls are foraging independently, the buffer may be reduced or the owls may be relocated prior to August 31, in consultation with the CDFW.

Mitigation Measure 12: Monitor Owls during Construction. Any owls occupying the Plan area or immediately adjacent areas are likely habituated to frequent human disturbances. As a result, they may exhibit a tolerance of greater levels of human disturbance than owls in more natural settings, and work within the standard 250-ft buffer during the nesting season may be able to proceed without disturbing the owls. Therefore, if nesting owls are determined to be present within the Plan area or within 250 ft of this area, and construction activities cannot feasibly avoid disturbance of the area within 250 ft of the occupied burrow during the nesting season (i.e., February 1 through August 31) due to other seasonal constraints, a qualified biologist will be present during all activities within 250 ft of the nest to monitor the owls' behavior. If in the opinion of the qualified

biologist, the owls are unduly disturbed (i.e., disturbed to the point of harm or reduced reproductive success), all work within 250 ft of the occupied burrow will cease until the nest is determined to no longer by active by a qualified biologist.

Mitigation Measure 13: Passively Relocate Owls. In the unlikely event that construction will directly impact occupied burrows, a qualified biologist will passively evict owls from burrows during the nonbreeding season (September 1 to January 31). No burrowing owls will be evicted during the nesting season (February 1 through August 31) except with the CDFW's concurrence that evidence demonstrates that nesting is not actively occurring (e.g., because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). Eviction will occur through the use of one-way doors inserted into the occupied burrow and all burrows within impact areas that are within 250 feet of the occupied burrow (to prevent occupation of other burrows that will be impacted). One-way doors will be installed by a qualified biologist and left in place for at least 48 hours before they are removed. The burrows will then be back-filled to prevent re-occupation. Although relocation of owls may be necessary to avoid the direct injury or mortality of owls during construction, relocated owls may suffer predation, competition with other owls, or reduced health or reproductive success as a result of being relegated to more marginal habitat. However, the benefits of such relocation, in terms of avoiding direct injury or mortality, would outweigh any adverse effects.

6.2.8 Impacts from Avian Collisions with New Buildings

Under existing conditions, terrestrial land uses and habitat conditions in the Plan area and in surrounding areas consist primarily of developed areas such as buildings (primarily of one or two stories), parking lots, roads, and a golf course. Vegetation in most of these areas is very limited in extent, and consists primarily of non-native landscaped trees and shrubs. The golf course to the north provides an area of extensive vegetation with habitat for certain common species of birds that forage in large open areas (e.g., the Canada goose and black phoebe, as well as several species of swallows and blackbirds), but the non-native vegetation, managed grounds, and limited habitat structure (e.g., lack of an extensive canopy and/or dense understory) limit the value of this habitat to bird communities. Non-native vegetation supports fewer of the resources required by native birds than native vegetation, and the structural simplicity of the vegetation (without well-developed ground cover, understory, and canopy layers) further limits resources available to birds. Thus, although a number of bird species will regularly use the vegetation in the Plan area and surrounding developed areas, they typically do so in low numbers. As a result, the number of individual landbirds that inhabit and regularly use vegetation in the Plan area at any given time is relatively low under existing conditions.

Under proposed conditions, based on the programmatic *Draft Tasman Focus Area Plan* (City of Santa Clara 2016), the site may provide habitat of slightly greater value to landbirds compared to existing conditions. Development under the Plan will comply with the General Plan, which includes conservation policies requiring the use of native plants and wildlife-compatible non-native plants, when feasible, for landscaping on City property, and encourages property owners and landscapers to use native plants and wildlife-compatible non-native plants, when feasible (City of Santa Clara 2010). In addition, the proposed approximately 2.5-ac park in the River District, to be located near the Guadalupe River, is identified in the Plan as the best opportunity to support

long-lived canopy trees and diverse habitats, and native plant species will be used in the park's planting design. Thus, although the ruderal habitat and potentially the wetland habitat on the site will be replaced with hardscaped areas and landscaping, the proposed trees and landscaped areas that will be planted on the site will provide greater habitat structure and foraging opportunities for landbirds than are provided by the existing non-native landscaped areas and ruderal habitat. Landbirds that will occur on the site and in the vicinity will be attracted to trees and landscaped areas, and will primarily move between the small areas of landscaping on the site and in the surrounding vicinity.

The increase in songbirds on the site that will result from the installation of proposed landscaping will be modest. Moderate numbers of migratory songbirds are often concentrated at the edge of the Bay during spring and fall migration, but the Plan area is located approximately 1.3 mi upstream from the Bay and is isolated from Bay habitats by dense urban development. Thus, relatively few of the birds migrating along the Pacific Flyway are expected to use the site itself during migration. However, numerous resident and migratory songbirds are known to occur at the adjacent Ulistac Natural Area, and a number of songbirds, waterbirds, and wetland-associated birds also occur along the Guadalupe River (Cornell Lab of Ornithology 2018, South-Bay-Birds List Serve 2018). Based on eBird reports, Ulistac Natural Area has the highest reported number of bird species of any location in the City of Santa Clara, and is one of only three inland (i.e., not along the edge of the San Francisco Bay) eBird "hotspots" (Ulistac Natural Area in Santa Clara, Lake Cunningham Park in San José, and Los Gatos Creek County Park in Los Gatos) in urbanized areas of the Valley floor where more than 150 bird species have been reported (Cornell Lab of Ornithology 2018). The reach of the Guadalupe River immediately adjacent to the Plan area does not support particularly high bird diversity due to the lack of woody riparian vegetation, but the reach immediately upstream from the Plan area supports a mix of woody riparian and emergent vegetation that supports high bird diversity and abundance. Many of the birds that are attracted to Ulistac Natural Area and the Guadalupe River are likely to fly through the site, even though they are not particularly attracted to, or expected to make heavy use of, the habitats in the Plan area.

In general, bird species that are attracted to wetland and aquatic habitats along the Guadalupe River and to native habitats at Ulistac Natural Area are expected to move through the Plan area when flying along the Guadalupe River. The numbers of these birds moving through the site will vary by time of year and by species. Many birds, such as waterfowl, often tend to move in large groups, while other species, such as San Francisco common yellowthroats, will move through individually. Local bird numbers also vary by time of year, as many birds form small to large flocks during winter and migration, and occur in more widely spaced pairs during the breeding season. However, due to the high importance of the Guadalupe River and Ulistac Natural Area to regional bird populations, relatively large numbers of birds that are associated with these habitats may fly past the Plan area relative to the size of regional populations.

The proposed zoning under the Plan allows for the construction of midrise (i.e., 4–8 stories) and high-rise (i.e., 12 or more stories) towers, with the goal of constructing a total of 4,500 residential units throughout the Plan area. Per the Plan description, the maximum height of buildings in the Plan area will be 220 ft. The exact locations of buildings, open spaces, pedestrian pathways, and other Plan components will be determined as the

Plan develops but is currently unknown. Thus, there is some possibility that tall buildings could be proposed adjacent to the Guadalupe River, adjacent to new open spaces, and/or along Tasman Drive near Ulistac Natural Area, in areas along the flight paths of birds flying to and from Ulistac Natural Area and the Guadalupe River.

It has been well documented that glass windows and building facades can result in injury or mortality of birds due to birds' collisions with these surfaces. Because birds do not perceive glass as an obstruction the way humans do, they may collide with glass when the sky or vegetation is reflected in glass (e.g., they see the glass as sky or vegetated areas); when transparent windows allow birds to perceive an unobstructed flight route through the glass (such as at corners); and when the combination of transparent glass and interior vegetation (such as in planted atria) results in attempts by birds to fly through glass to reach that vegetation. The area of a building that poses the greatest risk of avian collisions, or "primary bird collision zone", is located in the lower portion of the building because (a) most of the daily, routine activities of birds, such as foraging, roosting, and nesting, occur relatively close to the ground, and (b) these lower areas are where adjacent landscape vegetation (which provides both bird habitat and a source for reflections of vegetation within windows) may be present adjacent to glass façades. The height of this zone has been variously described by different organizations: New York City Audubon defines it as "the ground level and bottom few stories" (New York City Audubon 2007), the American Bird Conservancy defines it as the lower 40 ft of the building (but then also suggests that bird-safe design is necessary above 40 ft) (Sheppard and Phillips 2015), and the City of San Francisco defines it from ground level to a height of 60 ft (San Francisco Planning Department 2011). The 60-ft height of the primary bird collision zone used by the City of San Francisco Bird-Safe Standards has generally been adopted by other San Francisco Bay Area municipalities to establish local standards for bird-safe building design (e.g., by the City of Oakland and City of Mountain View [2017]). Thus, for the purpose of this analysis of the Tasman East Specific Plan, we define the primary bird collision zone as the area from ground level to a height of 60 ft.

Very tall buildings (e.g., buildings 500 ft or more high) may also pose a threat to birds that are migrating through the area, particularly to nocturnal migrants that may not see the buildings or that may be attracted to lights on the buildings (City of San Francisco 2011), but no buildings greater than 220 ft in height are proposed under the Plan. Nevertheless, as migrant birds ascend toward or rise from high-quality habitats in the Guadalupe River (particularly south of Tasman Drive) and at the Ulistac Natural Area, they will fly through areas more than 60 ft off the ground, where taller buildings may be located. If only occasional migrants were to use nearby bird habitats, then relatively few birds would be expected to fly through the airspace above the primary bird collision zone. However, owing to the value of the high-quality habitats near the Plan area, numbers of migrants ascending or descending through the Plan area's airspace more than 60 feet above the ground may be high during some portions of the spring and fall migratory periods. In addition, wildlife using the Guadalupe River may get the sense that they are "hemmed in" by development and unsuitable habitat if tall buildings were constructed very close to the Guadalupe River, potentially reducing wildlife use of the adjacent portion of the river.

If newly constructed buildings in the Plan area have extensive glass facades, birds are likely to collide with these facades for the following reasons:

- Birds are expected to fly past the Plan area along the Guadalupe River, and when flying to and from Ulistac Natural Area and the well-vegetated reach of the river immediately upstream from the Plan area, and birds flying up or down the river may pass through the Plan area. If glass is present on the façades of midrise and/or high-rise towers, birds making such movements are unlikely to be able to distinguish the presence of the glass façade and, as a result, some of these birds are expected to collide with the buildings.
- The Plan indicates that green roofs are a potential design feature of new buildings (City of Santa Clara 2016). Vegetation on green roofs or green walls is expected to attract birds. If glass features are present on a building's façade below and/or adjacent to vegetation on a green roof or wall, some birds that are attracted to the vegetation are expected to collide with the glass.
- Under the Plan, it is possible that trees and other landscaping will be present immediately adjacent to a building's glass walls. Such vegetation is expected to attract birds, drawing them towards the glass on the buildings. Further, the vegetation would reflect in the glass of the building's walls, potentially causing birds to attempt to fly in to the reflected "vegetation" and strike the glass. As a result, some birds that are attracted to the trees and other landscaping that is adjacent to the glass walls are expected to collide with the glass.
- Night lighting associated with new residential buildings has some potential to disorient birds, especially during inclement weather when night migrating birds descend to lower altitudes. As a result, some birds moving through the Plan area at night may be disoriented by night lighting and potentially collide with buildings.

Thus, depending on the design and location of the buildings in the Plan area, some of the birds using habitats on the site or flying through the site along the Guadalupe River are expected to strike the buildings, resulting in injury or death. Considering the close proximity of the Guadalupe River and Ulistac Natural Area, relatively large numbers of birds, compared to other areas of Santa Clara and most of the remainder of the urban Santa Clara Valley floor, are expected to fly past the site over the long term. Enough individuals of these common species can potentially strike the buildings over the long term to result in a significant impact according to CEQA. Mitigation Measures 14 and 15 below would incorporate bird-safe design elements into the building design, and reduce this impact to a less-than-significant level.

Mitigation Measure 14. Restrict Locations of Taller Buildings. No buildings taller than 55 ft (i.e., no buildings taller than the 4–5 story Type V wood frame buildings proposed by the Plan, which would have a maximum height of 55 ft) shall be constructed within 300 ft[4] of the top of bank of the Guadalupe River (i.e.,

[4] The buffer distance within which bird collision measures are prescribed can be different from a stream or riparian setback distance because these two distances are defined based on different objectives. The City of San Jose's Riparian Corridor Policy Study and the VHP determined that a 100-ft setback is appropriate for the Guadalupe River based on stream hydrology and function, as well as the goal of protecting habitat functions and values (ICF International 2012), such as protecting wildlife that are using adjacent riparian habitats from disturbance associated with adjacent land uses. However, the goal of minimizing bird collisions in this case requires defining an appropriate distance from high-quality bird habitats within which the presence of taller buildings is likely to result in a substantial increase in bird collisions as migratory birds ascend from or descend to adjacent high-quality habitats. As stated herein, the City of Mountain View's North Bayshore Precise Plan provides a precedent for this recommended distance of 300 ft (City of Mountain View 2017).

the aforementioned riparian buffer baseline) or the natural habitat on the southeast side of Tasman Drive (i.e., the northern edge of Ulistac Natural Area). This 300-ft distance is sufficiently broad to continue to allow adequate aerial movement space for birds that are entering, exiting, or flying in between Ulistac Natural Area and the Guadalupe River following Plan implementation. The City of Mountain View's North Bayshore Precise Plan provides a precedent for this measure, as construction of buildings taller than 55 ft is prohibited within 300 feet of the highest-quality riparian habitat in the Precise Plan area (City of Mountain View 2017).

Mitigation Measure 15. Implement Bird-Safe Building Design. Due to the potential for buildings in the Plan area to result in high numbers of bird collisions, particularly if extensive glass facades are used, new construction and building additions within the Plan area will implement the following bird-safe building design considerations.

- Reduce the extent of glass on the facades of new buildings and additions to the extent feasible.
- Reduce or eliminate the visibility of landscaped areas behind glass.
- No more than 10% of the surface area of a building's total exterior façade shall have untreated glazing between the ground and 60 feet above ground. Bird-safe glazing treatments may include fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 1/4 inch wide at a maximum spacing of 4 inches, or have horizontal elements at least 1/8 inch wide at a maximum spacing of 2 inches (Klem 2009). Any remaining untreated glazed areas will be broken up into sections no greater than 24 ft^2 in size by mullions or bird-safe glazing treatments.
- Avoid free-standing clear glass walls, skywalks, transparent building corners, glass enclosures (e.g., greenhouses) on rooftops, and balconies with unbroken glazed segments 24 ft^2 and larger where feasible. If any such features are included in building designs, all glazing used in any such features will be 100 percent treated.
- Reduce glass at tops of buildings, especially when incorporating a green roof into the building design.
- If a green roof or green wall is incorporated into the building design, no more than 10 percent of the surface area of the building's combined facades within 12 vertical feet above and/or below the green roof or green wall shall have untreated glazing. Any remaining untreated glazed areas will be broken up into sections no greater than 24 ft^2 in size by mullions or bird-safe glazing treatments.
- Avoid the funneling of flight paths between buildings or trees towards a glazed building façade.
- Landscaping, including planted vegetation and water features, shall be designed to minimize the potential for collisions. For example, vegetation providing particularly valuable resources to birds (such as fruits) will be planted away from buildings with extensive glazing, and vegetation in general will be planted in such a way that it is not clearly reflected in windows. Water features will be located away from building exteriors to reduce the attraction of birds towards glazed façades.

- Minimize exterior lighting to the extent feasible, except as needed for safety. All exterior lights shall be directed toward facilities in the Plan area (e.g., rather than directed upward or outward) and shielded to ensure that light is not directed outward toward the Guadalupe River or Ulistac Natural Area.
- Occupancy sensors or other switch control devices shall be installed on interior lights, with the exception of emergency lights or lights needed for safety purposes. On commercial buildings, these lights shall be programmed to shut off during non-work hours and between 10:00 p.m. and sunrise.

The City may waive or reduce any of the above-listed bird-safe design requirements in Mitigation Measure 14 based on analysis by a qualified biologist indicating that proposed construction will not pose a collision hazard to birds. Such a waiver will generally not be appropriate for façades adjacent to well-vegetated areas, but a waiver may be appropriate, for example, for façades that face developed areas lacking vegetation, water features, or other features that would be particularly attractive to birds.

6.2.9 Impacts due to Increased Lighting

Development under the Plan will result in the construction of buildings and features (e.g., pedestrian walkways and parks) that may increase the amount of lighting within and around the Plan area. Lighting from projects constructed under the Plan would be the result of light fixtures illuminating buildings, building architectural lighting, and parking lot and pedestrian lighting. Depending on the location, direction, and intensity of exterior lighting, this lighting can potentially spill into adjacent natural areas, thereby resulting in an increase in lighting compared to existing conditions. Areas to the north and west of the Plan area are primarily developed urban habitats that do not support sensitive species that might be significantly impacted by illuminance from projects under the proposed Plan. However, the wetland habitat in the Eastside Drainage Swale (if this wetland is not impacted under the Plan), wetland habitat in the Guadalupe River, and native habitats at Ulistac Natural Area all provide suitable habitat for a variety of wildlife species, including sensitive species such as the San Francisco common yellowthroat, and are close enough to the Plan area to be affected by an increase in lighting.

The existing Guadalupe River levee, which is approximately 18–20 ft above the grade within the Plan area, and the existing Tasman Boulevard embankment leading to the overpass over the Guadalupe River, which is up to 20 ft above the grade within the Plan area, separate the Plan area from the Guadalupe River and Ulistac Natural Area, respectively. These existing barriers are expected to limit the spill of lighting between the Plan area and the Guadalupe River and Ulistac Natural Area to some extent. However, light from tall buildings (potentially up to 220 ft tall) that may be constructed under the Plan could spill over these barriers and increase lighting in these adjacent natural areas. In addition, if the section of the Eastside Drainage Swale within the Plan area is not filled under the Plan, wetland habitat along the swale would potentially experience an increase in lighting regardless of building height, as the swale is not separated from the proposed buildings by any existing barriers.

Many animals are sensitive to light cues, which influence their physiology and shape their behaviors, particularly during the breeding season (Ringer 1972, de Molenaar et al. 2006). Artificial light has been used as a means of manipulating breeding behavior and productivity in captive birds for decades (de Molenaar et al. 2006), and has

been shown to influence the territorial singing behavior of wild birds (Longcore and Rich 2004, Miller 2006, de Molenaar et al. 2006). While it is difficult to extrapolate results of experiments on captive birds to wild populations, it is known that photoperiod (the relative amount of light and dark in a 24-hour period) is an essential cue triggering physiological processes as diverse as growth, metabolism, development, breeding behavior, and molting (de Molenaar et al. 2006). This holds true for birds, mammals (Beier 2006), and other taxa as well, suggesting that increases in ambient light may interfere with these processes across a wide range of species, resulting in impacts on wildlife populations.

Artificial lighting may indirectly impact mammals and birds by increasing the nocturnal activity of predators like owls, hawks, and mammalian predators (Negro et al 2000, Longcore and Rich 2004, DeCandido and Allen 2006, Beier 2006). The presence of artificial light may also influence habitat use by rodents (Beier 2006) and by breeding birds (Rogers et al. 2006, de Molenaar et al. 2006), by causing avoidance of well-lit areas, resulting in a net loss of habitat availability and quality.

Wildlife species using the Guadalupe River and/or Ulistac Natural Area may be subject to increased predation, decreased habitat availability (for species that show aversions to increased lighting), and alterations of physiological processes if development under the proposed Plan produces appreciably greater illuminance than the existing conditions. This impact on local wildlife populations is potentially significant under CEQA due to the high ecological value of the adjacent habitat areas along the Guadalupe River and at Ulistac Natural Area. Mitigation Measure 16 below would minimize lighting as part of project design under the Plan and would therefore reduce this impact to a less-than-significant level.

Mitigation Measure 16. Shield Exterior Lighting. To the extent consistent with the normal and expected operations of commercial and/or residential uses under the Plan, take appropriate measures to avoid use of unnecessary lighting at night, especially during the bird migration season (February through May and August through November). Such measures may include the installation of motion-sensor lighting, automatic light shut-off mechanisms, downward-facing exterior light fixtures, the use of Dark-Sky-compliant lighting[5], and others. Exterior lighting within the Plan area will be shielded as needed to block illumination from shining upward, or outward into the Guadalupe River to the east or Ulistac Natural Area to the south.

6.2.10 Impacts on Nesting Birds

Construction disturbance during the breeding season (February 1 through August 31, for most species) could result in the incidental loss of eggs or nestlings of bird species protected under the MBTA and California Fish and Game Code, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. The City of Santa Clara considers this impact to be significant under CEQA.

[5] Exterior lighting fixtures that meet the International Dark-Sky Association's standards for artificial lighting minimize glare while reducing light trespass and skyglow, and are required to be fully shielded and minimize the amount of blue light in the nighttime environment (International Dark-Sky Association 2018).

Implementation of Mitigation Measures 17–20 below would ensure that project activities comply with the MBTA and California Fish and Game Code and reduce this impact to a less-than-significant level.

Mitigation Measure 17. Avoidance. To the extent feasible, construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts on nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31.

Mitigation Measure 18. Pre-construction/Pre-disturbance Surveys. If it is not possible to schedule construction activities between September 1 and January 31 then pre-construction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests will be disturbed during Plan implementation. These surveys will be conducted no more than seven days prior to the initiation of construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings) in and immediately adjacent to the impact areas for nests.

Mitigation Measure 19. Buffers. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 300 ft for raptors and 100 ft for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation under the Plan.

Mitigation Measure 20. Inhibition of Nesting. If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by projects covered under the Plan may be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation, and prevent the potential delay of a project due to the presence of active nests in these substrates.

6.3 Cumulative Impacts

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. Future development activities in the City of Santa Clara will result in impacts on the same habitat types and species that will be affected by the proposed Plan. Projects under the Plan, in combination with other projects in the area and other activities that impact the species that are affected under the Plan, could contribute to cumulative effects on special-status species. Other projects in the area include both development and maintenance projects that could adversely affect these species and restoration projects that will benefit these species.

The cumulative impact on biological resources resulting from development under the Plan in combination with other projects in the larger region would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit of impact avoidance and minimization efforts

prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; and compensatory mitigation and proactive conservation measures associated with each project. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

However, the Santa Clara General Plan contains conservation measures that would benefit biological resources, as well as measures to avoid, minimize, and mitigate impacts on these resources. Many projects in the region that impact resources similar to those impacted by development under the proposed Plan will be covered activities under the VHP and will mitigate impacts on sensitive habitats and many special-status species through that program, which will require payment of fees for habitat restoration.

Further, the Plan would implement a number of BMPs and mitigation measures to reduce impacts on both common and special-status species, as described above. Thus, provided that this Plan successfully incorporates the mitigation measures described in this biological resources report, the Plan will not contribute to substantial cumulative effects on biological resources.

Section 7. References

Albion Environmental Inc. 2008. 2008 Nesting Burrowing Owl Survey Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP). Final Draft. Santa Clara County, California.

Baldwin, B. G.; D. H. Goldman; D. J. Keil; R. Patterson; T. J. Rosatti; and D. H. Wilken (editors). 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press. Berkeley, California.

Beier, P. 2006. Effects of artificial night lighting on mammals in Rich, C. and T. Longcore, eds. Ecological Consequences of Artificial Night Lighting. Covelo, CA: Island Press. Pp 19-42.

Bousman, W. G. 2007a. Swainson's hawk *Buteo swainsoni.* Pages 506-507 in W. G. Bousman, editor. Breeding bird atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

Bousman, W. G. 2007b. Loggerhead shrike *Lanius ludovicianus*. Pages 288-289 in W. G. Bousman, editor. Breeding bird atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

Bousman, W. G. 2007c. Common yellowthroat *Geothlypis trichas* Pages 386-387 in W. G. Bousman, editor. Breeding Bird Atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

Bury, R. B. and D. J. Germano. 2008. *Actinemys marmorata* (Baird and Girard 1852) - western pond turtle, Pacific pond turtle in G. J. Rhodin, C. H. Pritchard, P. P. van Dijk, R. A. Saumure, K. A. Buhlmann, and J. B. Iverson, editors. Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs.

[Cal-IPC] California Invasive Plant Council. 2016. California Invasive Plant Inventory Database. Accessed December 2016 from http://www.cal-ipc.org/paf/

[CDFG] California Department of Fish and Game. 2007. Vegetation Classification and Mapping Program List of California Vegetation Alliances and Rarity Ranking.

[CDFG] California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. March 7, 2012.

[CDFW] California Department of Fish and Wildlife. 2010. Vegetation Classification and Mapping Program: Natural Communities List. Accessed December 2016 from https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities.

[CNDDB] California Natural Diversity Database. 2016. Rarefind 5.0. California Department of Fish and Wildlife. Accessed December 2016 from http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

[CNPS] California Native Plant Society. 2016. Inventory of Rare and Endangered Plants (7.0 and 9.0 online editions). Accessed December 2016 from http://www.cnps.org/inventory.

City of Mountain View. 2017. North Bayshore Precise Plan, December 2017. Adopted by the Mountain View City Council December 9, 2014 and amended December 12, 2017. Resolution No. 18186.

City of Santa Clara. 2010. City of Santa Clara 2010–2035 General Plan. November 16, 2010.

City of Santa Clara. 2016. Tasman East Focus Area Plan (Draft). November 11, 2016.

City of Santa Clara. 2011. City of Santa Clara Draft 2010-2035 General Plan Volume I EIR Text. City of Santa Clara. January 2011.

Cornell Lab of Ornithology. 2016. eBird. http://www.ebird.org/. Accessed through December 2016.

DeCandido R. and D. Allen. 2006. Nocturnal hunting by peregrine falcons at the Empire State Building, New York City. Wilson J. Ornithol. 118(1): 53-58.

de Molenaar, J.G., M.E. Sanders, and D.A. Jonkers. 2006. Road lighting and grassland birds: local influence of road lighting on a black-tailed godwit population in Rich, C. and T. Longcore, eds. Ecological Consequences of Artificial Night Lighting. Covelo, CA: Island Press. Pp 114-136.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Garafa, LLC. 2015. GIS Pro (Version 3.18.1) [Software]. Available from www.garafa.com.

Gardali, T. and J. G. Evens. 2008. San Francisco common yellowthroat (*Geothlypis trichas sinuosa*) in W. D. Shuford and T. Gardali, editors. California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Western Field Ornithologists and California Department of Fish and Game, Camarillo and Sacramento, California.

Google Inc. 2016. Google Earth Pro (Version 7.1.5.1557) [Software]. Available from earth.google.com.

Guzy, M. J. and G. Ritchison. 1999. Common yellowthroat (*Geothlypis trichas*) in A. Poole and F. Gill, editors. The Birds of North America. The Birds of North America, Inc., Philadelphia.

H. T. Harvey & Associates. 1997. Santa Clara Valley Water District California Red-legged Frog Distribution and Status – 1997. June.

H. T. Harvey & Associates. 1999a. Santa Clara Valley Water District California Tiger Salamander Distribution and Status – 1999. Prepared for the Santa Clara Valley Water District.

H. T. Harvey & Associates. 2010a. City of Santa Clara Eastside Retention Basin Drainage Swale Vegetation Mowing Project – Biological Resources Report (HTH #3169-01)

H. T. Harvey & Associates. 2010b. Santa Clara Valley Water District San Francisco Dusky-Footed Woodrat Distribution and Status - 2010. Prepared for the Santa Clara Valley Water District.

H. T. Harvey & Associates. 2010c. Eastside Retention Drainage Swale Burrowing Owl Survey. HTH #3169-02. October 12, 2010.

H. T. Harvey & Associates. 2012a. Santa Clara Water Department Northside Tanks Rehabiliation Project – Burrowing Owl Survey and Strategy Assistance. HTH #3442-01. December 21, 2012.

H. T. Harvey & Associates. 2014. City of Santa Clara Security Fence – Burrowing Owl Monitoring Report. HTH #3442-03. October 22, 2014.

H. T. Harvey & Associates. 2012b. Santa Clara Valley Water District California Tiger Salamander Surveys and Site Assessments at Selected Santa Clara County Locations. Prepared for the Santa Clara Valley Water District. August 2012.

H. T. Harvey & Associates. 2015. Eastside Retention Drainage Swale – Burrowing Owl Survey Report. HTH #3169-03. December 3, 2015.

Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished report. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

ICF International. 2012. Final Santa Clara Valley Habitat Plan. August. Prepared for the City of Gilroy, City of Morgan Hill, City of San José, County of Santa Clara, Santa Clara Valley Transportation Authority, and Santa Clara Valley Water District.

ICF International. 2015. City Place Santa Clara Project Draft EIR. October 2015. ICF 00333.14. San Francisco, CA. Prepared for the City of Santa Clara, Santa Clara, CA.

International Dark-Sky Association. 2018. Outdoor Lighting Basics. http://darksky.org/lighting/lighting-basics/. Accessed June 2018.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. iii+255 p.

Lichvar, R.W. D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 Ratings. Phytoneuron 2016-30: 1-17. Published April 28, 2016. ISSN 2153 733X.

Longcore, T. and C. Rich. 2004. Ecological light pollution. Front. Ecol. Environ. 2(4): 191-198.

Menges, T. 1998. Common yellowthroat (*Geothlypis trichas*) in The Riparian Bird Conservation Plan: A Strategy for Reversing the Decline of Riparian-associated Birds in California. California Partners in Flight.

Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. Condor 108(1): 130-139.

[NETR] Nationwide Environmental Title Research. 2016. NETR Online Historical Aerials. Accessed December 2016 from http://www.historicaerials.com/

New York City Audubon Society, Inc. 2007. Bird-Safe Building Guidelines. New York, New York. May 2007.

[NRCS] Natural Resource Conservation Service. 2016. Web Soil Survey. U.S. Department of Agriculture. Accessed December 2016 from: http://websoilsurvey.nrcs.usda.gov

National Wetlands Inventory. 2016. Wetlands Mapper. U.S. Fish and Wildlife Service. Accessed December 2016 from: http://www.fws.gov/wetlands/Wetlands-Mapper.html

Negro, J. J., J. Bustamante, C. Melguizo, J. L. Ruiz, and J. M. Grande. 2000. Nocturnal activity of lesser kestrels under artificial lighting conditions in Seville, Spain. J. Raptor Res. 34(4): 327-329.

Nur, N., S. Zack, J. Evans, and T. Gardali. 1997. Tidal Marsh Birds of the San Francisco Bay Region: Status Distribution, and Conservation of Five Category 2 Taxa. PRBO Conservation Science final draft report to the United States Geological Survey.

PRISM Climate Group. 2016. Online PRISM Data Explorer. Oregon State University, Corvallis, OR. Accessed December 2016 from: http://www.prism.oregonstate.edu/

Ringer, R. K. 1972. Effect of light and behavior on nutrition. J. Anim. Sci. 35: 642-647.

Rogers, D. I., T. Piersma, and C. J. Hassell. 2006. Roost availability may constrain shorebird distribution: Exploring the energetic costs of roosting and disturbance around a tropical bay. Biol. Conserv. 33(4): 225-235.

Rosenberg, D. K., L. A. Trulio, D. Catlin, D. Chromczack, J. A. Gervais, N. Ronan, and K. A. Haley. 2007. The ecology of the burrowing owl in California. Unpubl. report prepared for the Bureau of Land Management.

Rosier, J. R., N. A. Ronan, and D. K. Rosenberg. 2006. Post-breeding dispersal of burrowing owls in an extensive California grassland. American Midland Naturalist 155:162-167.

Rottenborn, S. C. 2007a. Tricolored blackbird *Agelaius tricolor*. Pages 426-427 in W. G. Bousman, editor. Breeding Bird Atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

Rottenborn, S. C. 2007b. Savannah sparrow *Passerculus sandwichensis*. Pages 408-409 in W. G. Bousman, editor. Breeding Bird Atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

San Francisco Bay Bird Observatory. 2012. Determining the Breeding Extent of the San Francisco Common Yellowthroat and the Alameda Song Sparrow in Santa Clara County, California. Final Report. 17 December 2012.

San Francisco Estuary Institute. 2016. "Santa Clara Valley Historical Ecology GIS Data version 2" Accessed December 15, 2016. http://www.sfei.org/content/santa-clara-valley-historical-ecology-gis-data - See more at: http://www.sfei.org/content/santa-clara-valley-historical-ecology-gis-data#sthash.PevPZzcX.Vd6H7LFR.dpuf.

San Francisco Planning Department. 2011. Standards for Bird-Safe Buildings. Adopted June 2011.

Sawyer, J. O., T. Keeler-Wolf and J. M. Evens. 2009. A Manual of California Vegetation [online]. Second Edition. California Native Plant Society.

[SCVWD] Santa Clara Valley Water District. 2007. Santa Clara Valley Water Resources Protection Collaborative Guidelines & Standards for Land Use Near Streams. A Manual of Tools, Standards and Procedures to Protect Streams and Streamside Resources in Santa Clara County.

[SCVWD] Santa Clara Valley Water District. 2011. Final Subsequent Environmental Impact Report for the Multi-Year Stream Maintenance Program Update 2012-2022.

Sheppard, C. and Phillips, G. 2015. Bird-Friendly Building Design, 2nd Ed. The Plains, VA: American Bird Conservancy, 2015.

Stebbins, R. C. 2003. A field guide to western reptiles and amphibians. Boston, Massachusetts.

[SWRCB] State Water Resources Control Board. 2013 Preliminary Draft Water Quality Control Policy for Wetland Area Protection and Dredged or Fill Permitting. January 28, 2013.

South-Bay-Birds List Serve. 2016. http://groups.yahoo.com/group/south-bay-birds.

Trulio, L. A. 2007. Burrowing owl *Athene cunicularia*. Pages 236-237 in W. G. Bousman, editor. Breeding Bird Atlas of Santa Clara County. Santa Clara Valley Audubon Society, Cupertino, California.

[USACE] U.S. Army Corps of Engineers. 2007. Regulatory Guidance Letter: Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 of the Clean Water Act. No. 07-02. July 4.

[USACE] U.S. Army Corps of Engineers. 2015. Clean Water Rule: Definition of "Waters of the United States"; Final Rule. 33 CFR Part 328. Pages 37054–37127.

Wilkerson, R.L., and R.B. Siegel. 2010. Assessing Changes in the Distribution and Abundance of Burrowing Owls in California, 1993 – 2007. Bird Populations. Volume 10, pp. 1 – 36

Appendix A. Photos of the Plan Area

Photo 1. Dead stalks and flower heads of Congdon's tarplant at the Sunnyvale Baylands Park reference site in December 2016.

Photo 2. Roadways in the Plan area were mapped as developed/landscaped habitat.

Photo 3. Ruderal grassland habitat in the Plan area occurs on the slopes of the levee situated between the Eastside Drainage Swale and the Guadalupe River.

Photo 4. Perennial freshwater wetlands in the Plan area's Eastside Drainage Swale are dominated by cattail and California bulrush.

Photo 5. Mixed riparian woodlands include blue elderberry trees rooted in the banks of the eastside drainage swale.

Photo 6. A mature Fremont cottonwood overhanging the eastern corner of the Plan area was mapped as mixed riparian woodland.

Appendix B. Plants Observed

Family	Common Name	Scientific Name
Adaxaceae	blue elderberry	*Sambucus nigra* ssp. *caerulea*
Apiaceae	fennel	*Foeniculum vulgare*
Araliaceae	English ivy	*Hedera helix*
Arecaceae	Canary Island date palm	*Phoenix canariensis*
Asteraceae	bristly ox-tongue	*Helminthotheca echioides*
	milk thistle	*Silybum marinum*
Brassicaceae	wild radish	*Raphanus sativus*
	black mustard	*Brassica nigra*
Cupressaceae	coast redwood	*Sequoia sempervirens*
	juniper (ornamental)	*Juniperus* sp.
Cyperaceae	California bulrush	*Schoenoplectus californicus*
Fabaceae	acacia	*Acacia* sp.
	clover	*Trifolium* sp.
Fabaceae	vetch	*Vicia* sp.
Geraniaceae	crane's bill geranium	*Geranium molle*
	filaree	*Erodium* sp.
Malvaceae	bull mallow	*Malva nicaeensis*
	cheeseweed	*Malva parviflora*
Myrtaceae	bottle brush	*Callistemon* (*citrinus*)
	eucalyptus	*Eucalyptus* sp.
Oleaceae	European olive	*Olea europaea*
	shamel ash	*Fraxinus* (*uhdei*)
Pinaceae	Canary Island pine	*Pinus canariensis*
Platanaceae	London plane	*Platanus hybrida*
Poaceae	bentgrass	*Agrostis* sp.
	canary grass	*Phalaris* sp.
	fumitory	*Fumaria* sp.
	smilo grass	*Stipa miliacea* var. *miliacea*
	wild oats	*Avena* sp.
Saliaceae	Fremont cottonwood	*Populus fremontii*ssp. *fremontii*
Typhaceae	cattail	*Typha* sp.

Appendix C. Potentially Occurring Special-Status Plant Species

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside Elevation Range	Extirpated from Project Vicinity
alkali milk-vetch	*Astragalus tener var. tener*	x	x		
arcuate bush-mallow	*Malacothamnus arcuatus*	x			
bay buckwheat	*Eriogonum umbellatum var. bahiiforme*	x	x	x	x
big-scale balsamroot	*Balsamorhiza macrolepis*	x	x	x	x
Brewer's calandrinia	*Calandrinia breweri*	x	x		x
Brewer's clarkia	*Clarkia breweri*	x	x	x	x
bristly leptosiphon	*Leptosiphon acicularis*	x		x	x
brittlescale	*Atriplex depressa*	x			
California alkali grass	*Puccinellia simplex*	x			x
California androsace	*Androsace elongata ssp. acuta*	x		x	x
California seablite	*Suaeda californica*	x		x	
caper-fruited tropidocarpum	*Tropidocarpum capparideum*	x	x		x
chaparral harebell	*Campanula exigua*	x	x	x	x
chaparral ragwort	*Senecio aphanactis*	x		x	x
clay buckwheat	*Eriogonum argillosum*	x	x	x	x
clustered lady's-slipper	*Cypripedium fasciculatum*	x	x	x	x
coast iris	*Iris longipetala*	x			x
Congdon's tarplant	*Centromadia parryi ssp. congdonii*				
Contra Costa goldfields	*Lasthenia conjugens*	x			
cotula navarretia	*Navarretia cotulifolia*	x			x
Delta woolly-marbles	*Psilocarphus brevissimus var. multiflorus*	x			x
Diablo helianthella	*Helianthella castanea*	x		x	x
dusky-fruited malacothrix	*Malacothrix phaeocarpa*	x		x	x
elongate copper moss	*Mielichhoferia elongata*	x			x
fragrant fritillary	*Fritillaria liliacea*	x	x		x

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside Elevation Range	Extirpated from Project Vicinity
Gairdner's yampah	*Perideridia gairdneri ssp. gairdneri*	x			x
hairless popcornflower	*Plagiobothrys glaber*	x		x	
Hall's bush-mallow	*Malacothamnus hallii*	x			x
Hickman's popcornflower	*Plagiobothrys chorisianus var. hickmanii*	x			x
Hoover's button-celery	*Eryngium aristulatum var. hooveri*	x			
Hospital Canyon larkspur	*Delphinium californicum ssp. interius*	x		x	x
Jepson's woolly sunflower	*Eriophyllum jepsonii*	x	x	x	x
large-flowered leptosiphon	*Leptosiphon grandiflorus*	x	x		x
lesser saltscale	*Atriplex minuscula*	x			
Loma Prieta hoita	*Hoita strobilina*	x	x		x
maple-leaved checkerbloom	*Sidalcea malachroides*	x	x		x
Metcalf Canyon jewelflower	*Streptanthus albidus ssp. albidus*	x	x	x	x
Mexican mosquito fern	*Azolla microphylla*	x			x
Michael's rein orchid	*Piperia michaelii*	x			x
most beautiful jewelflower	*Streptanthus albidus ssp. peramoenus*	x	x	x	x
Mt. Diablo cottonweed	*Micropus amphibolus*	x	x	x	x
Mt. Hamilton fountain thistle	*Cirsium fontinale var. campylon*	x	x	x	x
narrow-petaled rein orchid	*Piperia leptopetala*	x		x	x
Oakland star-tulip	*Calochortus umbellatus*	x	x	x	x
Patterson's navarretia	*Navarretia paradoxiclara*	x		x	x
phlox-leaf serpentine bedstraw	*Galium andrewsii ssp. gatense*	x	x	x	x
Point Reyes bird's-beak	*Chloropyron maritimum ssp. palustre*	x	x	x	
prostrate vernal pool navarretia	*Navarretia prostrata*	x			
robust spineflower	*Chorizanthe robusta var. robusta*	x	x		x
round-leaved filaree	*California macrophylla*	x	x		x
saline clover	*Trifolium hydrophilum*	x	x		
San Antonio Hills monardella	*Monardella antonina ssp. antonina*	x		x	x
San Francisco collinsia	*Collinsia multicolor*	x			x

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside Elevation Range	Extirpated from Project Vicinity
San Francisco wallflower	*Erysimum franciscanum*	x	x		x
San Joaquin spearscale	*Extriplex joaquinana*	x	x		
Santa Clara red ribbons	*Clarkia concinna ssp. automixa*	x		x	x
Santa Clara thorn-mint	*Acanthomintha lanceolata*	x	x	x	x
Santa Clara Valley dudleya	*Dudleya abramsii ssp. setchellii*	x	x	x	x
Satan's goldenbush	*Isocoma menziesii var. diabolica*	x			x
serpentine leptosiphon	*Leptosiphon ambiguus*	x	x	x	x
serpentine sunflower	*Helianthus exilis*	x	x	x	x
slender-leaved pondweed	*Stuckenia filiformis ssp. alpina*	x		x	x
smooth lessingia	*Lessingia micradenia var. glabrata*	x	x	x	x
South Coast Range morning-glory	*Calystegia collina ssp. venusta*	x	x	x	x
spring lessingia	*Lessingia tenuis*	x		x	x
stinkbells	*Fritillaria agrestis*	x	x		x
sylvan microseris	*Microseris sylvatica*	x	x	x	x
Tracy's eriastrum	*Eriastrum tracyi*	x		x	x
western leatherwood	*Dirca occidentalis*	x			x
woodland woolythreads	*Monolopia gracilens*	x	x	x	x
woolly-headed lessingia	*Lessingia hololeuca*	x	x		x